SAFETY

A NATIONAL SAFETY COUNCIL PUBLICATION

In this issue

- Congress—12,000 Safety Men on the GO
- > Three Dimensions in Safety
- The Convincing Case for Safety Shoes



EVEN PROGRESS BRINGS ITS HAZARDS

Civilization today runs on wheels. Yet this greatest of man's inventions came from the mind of prehistoric man an estimated 5,000 years ago. His original wheel furnished the basis for practically all machines and rotating parts in our highly accelerated industrial plants today. Perversely enough, this great boon to the advancement of modern civilization has also become man's greatest hazard to life and limb.

In today's advancement of American Industry, new foot hazards to the worker spring up at every turn. To meet this challenge the selection of safety shoes for every job hazard is one of the modern safety engineer's most important responsibilities.

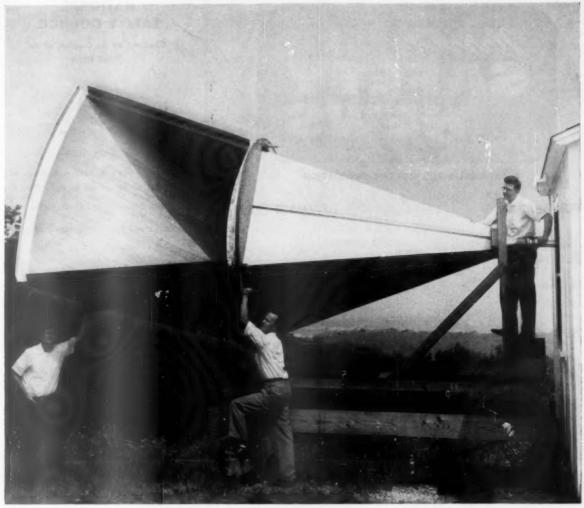
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to develop and produce *austempered* steel toes of the finest quality and design that modern science can create. 19 distinct styles of steel safety toes are now available to fill *every* shoemaking requirement WINGUARDS, of course, are *still* the most popular.

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At Bell Laboratories, Holmdel, N. J., a horn reflector antenna is beamed skyward by scientists Edward Ohm, David Hogg and Robert DeGrasse. The maser amplifier, which employs a ruby cooled in liquid helium, is inside building at right. Over-all "noise" temperature of antenna, amplifier and sky is only 18"K at 5600 megacycles.

ANOTHER STEP TOWARD SPACE COMMUNICATIONS

The above antenna is part of a new ultra-sensitive radio receiving system under development at Bell Telephone Laboratories. It has extraordinary directivity. Beamed skyward, it ignores radio "noise" from the earth, yet picks up extremely weak signals from outer space.

The signals are amplified by the latest Bell Laboratories "maser" amplifier. The maser principle was first demonstrated, using gas, by Prof. C. H. Townes and his collaborators at Columbia University. Bell Laboratories scientists applied it to the solid state guided by a theoretical proposal of Prof. N. Bloembergen of Harvard University. Their latest traveling wave maser amplifier employs a ruby mounted in a waveguide. The ruby is excited to store energy. As signals pass through, they absorb this energy and are thus amplified.

The device uniquely combines the characteristics needed for practical space communication: extremely low inherent noise and the ability to amplify a broad frequency band.

At present the receiving system is being used to pick up and measure minute radio noise generated by the atmosphere. It also foreshadows important advances in long distance communications. For example, it could extend the range of space-probe telemetering systems, could help make possible the transatlantic transmission of telephone and TV signals by bouncing them off balloon satellites—and has numerous applications in radio astronomy and radar.

This pioneer development in radio reception is one more example of the role the Bell System plays in the pursuit of better communications technology.

BELL TELEPHONE SYSTEM





A NATIONAL SAFETY COUNCIL PUBLICATION

VOL. 80, No. 6

DECEMBER 1959

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NATIONAL SAFETY COUNCIL

Chartered by the Congress of the United States



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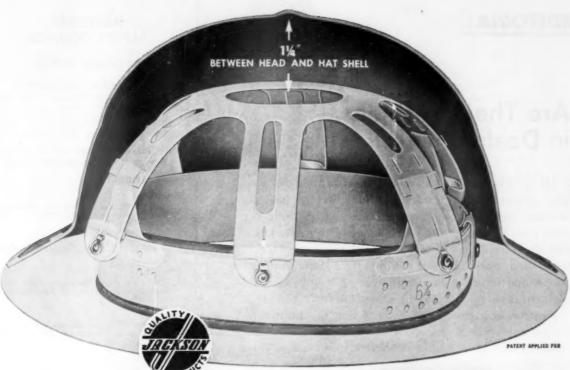
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THE COVER

Foreman Charlie Mills of United Illuminating Company puts his crew through a drill on pole-top resuscitation. (Photo courtesy UI News)

37,700 copies of this issue were printed

National Safety News, December, 1959



Fixed Safety Margin + Comfortable Fit

There's no gamble with safety when workers adjust this new Jackson safety hat headgear for good fit and comfort. The 1¼-inch inside distance over the top of the head is there to stay.

Headgear consists of Cradle and Headband, connected by four "T"-Straps; all are made of polyethylene. This assembly is pliable, resilient, shock absorbing. It also holds its shape and is smooth, without pressure points. It is easy to clean, even without removal from hat or cap.

CRADLE fastens firmly to the hat shell, providing a permanent distance of 1½ inch between head and inside of shell, measured under 25 pounds of pressure applied to top of hat.

HEADBAND with all-around, soft-lined leatherette sweatband is adjustable to clearly marked hat sizes from 6¾ through 7½, and is inexpensive to replace.

"T"-STRAP CONNECTION allows about ¾ inch of headband height adjustment without disturbing the fixed crown safety.

This new headgear will be standard at no extra cost on Jackson Fiber Glass Hats and Caps which, as before, pass all physical requirements of Federal Specification GGG-H-142b and on the Aluminat and Alumicap which fill the same requirements except for electrical resistance.

ADD TO THE SAFETY AND COMFORT of your present Jackson Hats and Caps (fiber glass and aluminum) by replacing old headgears with this new, all-plastic, fixed-crown safety headgear.

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JACKSON FIBER GLASS SAFETY HAT AND CAP Chin straps of high quality elastic webbing are available to fit all Jackson safety hats and caps.





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"WINTERIZERS" FOR SAFETY HATS AND CAPS Colcap to protect the skull, Frigicap (right) with adjustable chin strap to protect the ears as well.

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EDITORIAL

Are There Fashions in Dealing with People?

MOST OF US have learned (or so we thought) that good supervision means leading and directing people. We have come to accept as gospel that a successful leader must gain the respect and confidence of those he leads, and that employees must derive personal satisfaction from their work and surroundings. We don't just pay people and forget them. This whole philosophy of management is wrapped up in the phrase "human relations."

Now we hear from some quarters that this human relations approach is obsolete! Many of the same practitioners who were selling human relations a few years ago are now telling us the cooperative approach is all wrong. They tell us in effect: "You hire a man to do a job, and you expect him to do it-no need to persuade him that he likes what he's doing."

Do these shifts in personnel practice theory follow the business cycle, the whims of management consultants or the phases of the moon? We don't pretend to know, but it seems that some of those who ride the after-dinner and convention circuits may be telling their audiences just what they think the audiences want to hear. And now it seems in style to tell them that the proponents of good human relations are bleeding hearts.

It's even more tiresome to follow these prescribed styles in conduct than to follow seasonal changes in necktie width. Perhaps what we are seeing is a reaction to the previous excess of sweetness. When enough was learned about human conduct so it could be predicted with a reasonable degree of success, some people went overboard for the new concepts. Certainly an atmosphere that could permit invention of such a repulsive term as "human engineering" contained an excess of something.

A good supervisor knows how to inspire people to do their best year-in and year-out, whether times are good or bad. Accidents cause suffering and cost money whether they happen in prosperity or recession, and a good safety manager doesn't have to change his approach to suit the

Good supervision and good safety programs don't go out of style.

NATIONAL SAFETY COUNCIL

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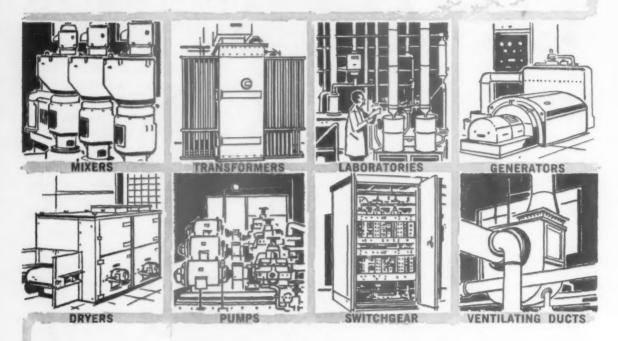
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Which of these common fire hazards threaten you?





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dependable, high-quality carbon dioxide, dry chemical or foam systems to extinguish fire, plus detecting systems to detect and locate fire automatically.

Your experienced C-O-Two representative is well qualified to carefully analyze all special hazards. Because he offers the industry's largest line of fire protection products and services, he can make equipment recommendations without prejudice. Each C-O-Two System is carefully engineered and manufactured... and C-O-Two will also expertly install the system, if desired.

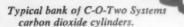
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New "Safety Turins"!

low-cost 21/2 lb. pressurized Dry Chemical extinguishers

... now charged with patented "formula H"!

If you're looking for a low cost, high quality, multipurpose extinguisher... one that's both compact and effective—then this is your baby! Available in either sparkling Chrome Plate or lustrous Vermillion Red, this new, budget-priced $2\frac{1}{2}$ lb. dry chemical extinguisher packs high fire-killing power against flammable liquid, gas and electrical hazards. To further boost speed, dependability and effectiveness, the "Safety Twins" are charged with patented "Formula H," an exclusive moisture-repellent, heat-resistant, non-caking powder that flows freely under all conditions!

Because extinguisher is lightweight and easy to operate, it can be used effectively by women as well as male employees in factories, office buildings, schools and institutions, and by all household members around the home, car, garage, boat, etc. Operation is fast, simple, effective. Squeezing the "grip fit" handle releases a 60° wide angle blanket of powder in a flat dense pattern. The dry chemical reaches 10 to 12 feet to quickly smother incipient fires. Pressure gauge shows operating condition at a glance. Model is fully approved by Factory Mutual, U. S. Coast Guard, and Underwriters' Laboratories and carries new high 4-B, C rating by U. L.

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FOR WORKERS'

- Safety
- Health
- Comfort
- Efficiency

VANO® Design "A" VENTILATOR



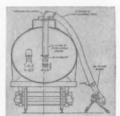
Vono Design "A" cooling interior of furnace, supplying fresh air through 10 feet of "Ventube" to provide safety and comfort during repair weeks.

Vano Design "A" delivering fresh air to cable manhale, expelling sewer gas, making entrance safe in a few minutes.

few accessories feeds large air volume into tank car, driving out fumes, stagnant or hot air for workers' safety and comfort.









Vano Design "A" supplying fresh air in Reactor Room of Synthetic



Vano Design "A"
Ventilator supplying fresh air to
men working in
wing compartments, fuselages,



Powered by a ½hp motor, and equipped with the exclusive Coppus axial-flow propellertype fan, this general-purpose blower delivers 1500 CFM of fresh air. It supplies ventilation for tanks, tank cars, drums, vats, underground cable manholes, pipe galleries, airplane wing compartments and fuselages, and other confined places. Weighs only 103 lbs. Uses 8"-diameter flexible canvas tubing ("Ventube").





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Vano Design "C" equipped with 8" discharge tubing removing welding



Vano Design "C" equipped with two suction lines removing welding fumes for opera-tors' safety.



For withdrawing welding fumes from confined places or directly from the welding rod ...or for expelling fumes or hot air from enclosed vessels. You can get it with 8" suction inlet for 8" non-collapsible tubing ...or with multiple inlet nozzles for 5", 4" or 3" suction hose. The discharge outlet takes 8" "Ventube", Powered by a 1/2 hp motor, it weighs only 85lbs.

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 - (Write here any special ventilating problem you may have.)
- on steam-heated rub-ber processes. general man cooling.
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- motors, generators, switchboards.
- wires and sheets.
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COPPUS "BLUE RIBBON" PRODUCTS — Designed for Your Industry, Engineered for You

Circle Item No. 5-Reader Service Card

THE ACCIDENT BAROMETER



Prepared by the Statistics Division National Safety Council

ACCIDENTAL deaths in August numbered about 8,000—no change from 1958. An increase in public non-motor-vehicle accident fatalities was offset by a decrease in work deaths. The home and motor-vehicle accident totals were about the same as last year.

The eight-month death total was 60,400, an increase of 2 per cent over 1958. More deaths resulted from motor-vehicle and public non-motor-vehicle accidents and about the same number from work and home accidents.

Motor-Vehicle Deaths

There were about 3,450 deaths from motor-vehicle accidents in August—no change from 1958.

Deaths during the eight months totalled 23,810, or 4 per cent more than a year ago. The eight-month death rate per 100,000,000 vehicle miles was 5.1, a decrease of 2 per cent from 5.2 in 1958.

Of the 48 states reporting for eight months, 13 had fewer deaths than last year (including Alaska) and 35 had more deaths. States with the greatest improvement for the first eight months of 1959 were: Maine, —25 per cent; Alaska, —22 per cent; and Louisiana, —21 per cent.

Reporting cities with populations

of more than 10,000 had an increase of 10 per cent for August and 3 per cent for the eight-month period. Cities with more than 200,000 population having the largest reduction in deaths for the first eight months of the year were: Rochester, N. Y., —69 per cent; Norfolk, Va., —47 per cent; and Akron, Ohio, —34 per cent.

Work Accidents

Deaths from work accidents in August totalled 1,150, or 4 per cent less than last year. The total for eight months was 8,900—the same as in 1958.

The August frequency rate per 1,000,000 man-hours in 18 sectional accident prevention contests conducted by the National Safety Council was 6.17, an increase of 21 per cent over last year. The eight-month rate was 5.38—up 7 per cent.

Public Deaths

Public non-motor-vehicle deaths in August numbered about 1,850, or 50 more than in 1958.

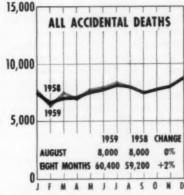
Deaths during the eight months totalled about 11,800, an increase of 3 per cent over last year. There were more deaths from burns, falls, and unspecified public accidents and fewer deaths from drownings, fire-

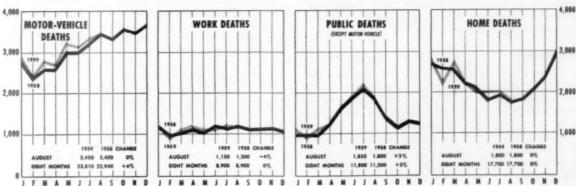
arms and transportation accidents. Decreases occurred in the 15-to-24 and 25-to-44-year age groups. Other age groups showed increases, with the largest change recorded for children under 5 years old.

Home Deaths

Deaths from home accidents numbered about 1,800, or no change from August 1958.

The eight-month total was 17,700—also no change from a year ago. There were increases in deaths from firearms accidents, poisonings, and mechanical suffocation; decreases in poison gases, and falls; no change in burns. Decreases in the 45-to-64 and 65-and-older age groups were offset by increases in the other age groups.





THE SAFETY VALVE



Nothing human is alien to me

-TERENCE

ANOTHER MILESTONE

LAST MONTH, my editorial associates took over this page to say some very kind things about me on the fortieth anniversary of the News. They did gloss over some of the details but the story was reasonably accurate and I'm most grateful.

One correction should be noted. They described me as a "mule skinner" in World War I. Actually, I was only a driver. A "skinner," as we used the term, was a fellow who could tame outlaw mules. I could manage those long-eared, long-faced hybrids only when they were willing.

My thanks also to the readers who have sent in their congratulations on the anniversary. Among them were some old friends, long retired from active service.

To have been associated with the News for nearly 37 of its 40 years has been an experience rich in satisfactions—both in the job itself and in friendships with fellow staff members and readers.

The News, like the organization that sponsors it, has grown because of the generous cooperation of members. Not all of the published contributions have received the recognition of a by-line. Much of the help has been in the form of short items describing methods and discoveries that have made jobs safer, and in helpful counsel through personal correspondence.

Among the editorial helpers special credit is due the staff of the Council's Industrial Department. Their monthly contributions, such as the *Data Sheets* and the various departments, are only part of the total. Collectively, they represent a vast amount of experience in accident prevention and industrial hygiene and they have always been available for consultation.

In 1969, when the magazine celebrates its golden jubilee, I hope to send my congratulations from the farm (location not yet selected).

For the present, the undersigned and his associates extend to all laborers in the safety vineyard their best wishes for the holiday season and dramatically reduced frequency and severity rates in 1960.

LANGUAGE

EVERY YEAR many visitors from other countries call at NSC headquarters. Members of the staff have learned much from them and in return have been able to supply them with helpful information from American experience.

Most of these visitors have one characteristic that is rare among Americans. There are few who do not speak at least one language other than their own. Most of us, I'm afraid, would have a tough time in Stockholm, Helsinki, or Warsaw if so many Europeans didn't speak English.

The average American's knowledge of foreign languages is usually limited to a smattering of French, German, or Spanish picked up reluctantly in high school and quickly forgotten. But language learned from a book is painfully inadequate for social or business use. School textbooks inevitably lag behind the rest of the world. Foreign newspapers would be helpful in learning a living language—even if they are not examples of classic prose. And more conversation is needed in classes.

My own high school French was supplemented by two years in France and Belgium, mostly in rural parts where few natives understood English. However, the local folks and the troops developed a *lingua franca* which was adequate for most purposes.

For several months after the Armistice I was billeted in the home of a retired schoolmaster in a village near Brussels, where I had a good chance to improve my French. For several years I kept up an intermittent correspondence. But new interests crowded out old ones, and it became increasingly difficult to express myself in another language.

The Council has many members in France and Belgium, and the correspondence usually comes to my desk for translation. Correspondents in other countries invariably write in English. I've never tried to reply in French.

Recently a young engineer from Paris dropped in at our office. His knowledge of English was approximately equal to my knowledge of French, but somehow we managed to make ourselves understood.

THE AGE of great men is going; the epoch of the ant hill, of life in multiplicity, is beginning. The century of individualism, if abstract equality triumphs, runs a great risk of seeing no more true individuals. By continual leveling and division of labor, society will become everything and man nothing.

HENRI FREDERIC AMIEL, 1851

DEFINING SAFETY

THE DICTIONARY DEFINITION of safety, referring merely to an inert state of security, has never satisfied safety men. And we like to feel that the safety movement covers more than accident prevention. Many interpretations, some of them excellent, have been written but most of them are too long to be remembered easily.

For a capsule definition, this one's hard to beat: SAFETY is know-how, common sense, and teamwork all wrapped up in one package.

It appeared originally in *United Gas Log*, published by United Gas Pipe Line Company, Shreveport, La.

Carman Fish

Case History No. 106

Dallas Cast Stone Co.

"WE GET 3 TIMES
THE WEAR AT NO
EXTRA COST WITH
RIEGEL PLASTICCOATED GLOVES"



Here Are The Facts!

COMPANY: Dallas Cast Stone Co., Dallas, Texas

GLOVE PREVIOUSLY USED: Competitor's Plastic Coated

GLOVE RECOMMENDED: Riegel Plastic Coated Palm, No. 418

SAVINGS: "We get three times more wear. Far exceeds any type we have ever used before. Riegel's No. 418 costs no more, so we've cut our glove costs on this operation almost 66%!"

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Here is another saving made possible because Riegel Industrial Analysts fit the right glove to the job. For help in reducing *your* glove cost, call or write Riegel today.

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SALES OFFICES AND DISTRIBUTORS IN PRINCIPAL CITIES

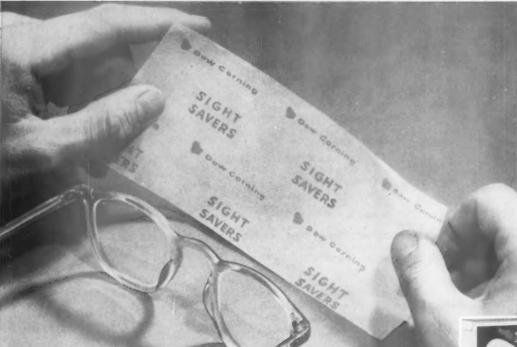


Guide and Case

History File

Circle Item No. 6-Reader Service Card

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FREE WALL DISPENSERS!

\$2.50 value each . . . free with your purchase and continued use of SIGHT SAVERS

- Strong, heavy-gauge steel . . . pilfer proof.
- No waste delivers just one tissue at a time.
- No mess no liquids, no bottles, no extras.
- Never runs out can be refilled before empty.
- Easy to install compact, only 31/2" x 8" overall.
- . Attractive colors safety green, white or black.



...by far, the most efficient lens tissues you can supply!

New soft-textured, embossed finish

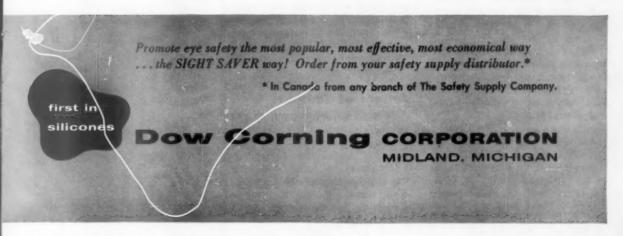
Gives greatest cleaning and polishing action --- no slip, easier to grip!

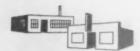
Completely soaked in silicones

Use either side of the tissue. Remember, it's the silicones on the tissue that do the work and SIGHT SAVERS have at least twice the silicone content of other tissues . . . it's as simple as that!

More reasons why SIGHT SAVERS are your safest buy

- Nationally advertised; known, preferred and purchased by millions of satisfied users. You don't have to "sell" workers on using SIGHT SAVERS... your employees are already pre-sold.
- Exactly the right size to clean glasses most efficiently...economically.
- Endorsed by leading opticians . . . meet Federal specification UU-P-313d for lens cleaning tissues.





SMALL BUSINESS and ASSOCIATIONS

By A. M. Baltzer and John T. Curry Small Business Program Staff, National Safety Council

Ray Ellis, Jr., Directs Small Business Division

Raymond C. Ellis, Jr., has been appointed Director of the Small Business and Associations Division,



Ray Ellis, Jr.

effective Nov. 1, 1959. Previously, he had served as senior engineer in the Council's Industrial Department, with service to the Food and Beverage and the Trades and Services Sections.

Before joining the Council, he served in personnel director, warehouse management and safety director assignments for the Chicago area operations of Marshall Field and Company.

Ellis has studied at Northwestern University, Ohio State University and the University of Chicago. He is a member of the Chicago Chapter of the American Society of Safety Engineers and the Newcommen Society of North America.

A frequent contributor to trade

journals and association magazines, Ellis has worked closely with a number of associations in development and extension of safety to their member organizations.

A. M. Baltzer, in charge of the Small Business and Associations program since its beginning in 1951, is now in charge of production of materials in the NSC Industrial Department. His title is Director, Production Division.

Safety Swap Shop Successful at Congress

The "Associations Safety Swap Shop" at the Conrad Hilton was held on Wednesday morning, October 21, during the recent National Safety Congress in Chicago.

The session was well attended and developed considerable discussion on problems regarding safety programs and measures to alleviate difficulties.

Small Business and Associations Committee Chairman Clyde Schlueter did an excellent job in moderating the meeting. He directed discussion into channels best calculated to highlight many conditions that harry the busy association executive in the development and conducting of an industry-wide program. About two dozen associations were represented.

Notes on the meeting are being prepared and will be mailed to all who attended and to those persons requesting copies.

A Note of Thanks

A word of appreciation to our retiring chairman, Clyde Schlueter, for his direction of the Small Business and Associations Committee. Every success to him as he assumes the chairmanship of the Industrial Conference's Research Projects Committee for the National Safety Council.

Frank Laderer Chairs Small Business Committee

Frank Laderer, director of safety for Nationwide Insurance Company, Columbus, Ohio, is the new chairman of the Small Business and Associations Committee. He has also served as vice-chairman, member of the committee, and member of the Industrial Conference.

Before entering the insurance field, Laderer had experience in highway construction and maintenance and special police traffic work. He organized the Engineering, Inspection and Audit Department for the Farm Bureau Insurance Companies in 1940 and served as manager of this department until 1952

Laderer attended Pennsylvania State University and has completed special courses in safety at Pennsylvania State, the Insurance Institute of America and the National Safety Council.



Frank Laderer

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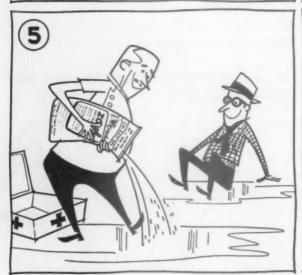
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WIRE FROM

WASHINGTON

By HARRY N. ROSENFIELD, Washington Counsel, National Safety Council

This report is an information service. Publication does not imply National Safety Council approval of or opposition to any legislation mentioned

A SURVEY of Washington's safety activities during the past year can serve two functions: to review what took place, and to assess what it foretells for next year. Sometimes here, as elsewhere, "coming events cast their shadows before."

I shall dwell principally on major Congressional action and interest, centered mainly on transportation and traffic safety.

Industrial Safety. S. 2568 became law, PL86-373. It creates a Federal Radiation Council to centralize responsibility for general standards and guidance to federal executive agencies in their operating regulations for radiological health protection.

In addition, the new law permits some decentralization by authorizing states to assume certain regulatory responsibility for the public's protection from radioactivity.

Atomic energy and its safety aspects were matters of deep concern to the Congress and the executive establishment. The Atomic Energy Commission established a new Office of Health and Safety.

The AEC's General Advisory Committee, as well as the National Advisory Committee on Radiation (advisory to the Public Health Service), both urged transfer to the national and local public health agencies of responsibility for radiation safety. Senate hearings have been held on legislation designed to achieve this result.

The Senate Committee on Labor and Public Welfare approved S. 743

to broaden the application of the Federal Coal Mine Safety Act to mines employing 14 or fewer individuals.

Highway Safety. Perhaps, one of the most significant, if little discussed, developments is that transportation safety has come of age in Congress and has achieved organizational status and power in the Congressional committee structure. In 1958 the Roberts Subcommittee on Traffic Safety was a special committee of limited jurisdiction. This year, it is a standing subcommittee on Health and Safety, with broad jurisdiction and authority.

Two bills from this new subcommittee were passed by the House of Representatives and await Senate action next year:

The first bill, H.R. 1341 (Roberts), requires the secretary of commerce to determine which "rea-

sonable safety devices" are mandatory for nonmilitary motor vehicles bought by the U. S. Government, and to publish commercial standards for such safety devices.

Although in terms limited to federally-owned vehicles, the bill is designed by its sponsor to "promote the production of safer vehicles . . . for sale to the public."

The Roberts committee told Congress that it expected the bill would "hasten the day when such safety features become standard equipment on all passenger-carrying motor vehicles offered for sale to the public."

A similar expectation was voiced by Gen. G. C. Stewart in his testimony expressing the National Safety Council's support for H.R. 1341.

In self-defense against attacks that this bill means federal domination of the automobile industry and federal take-over of the designing and engineering of automobiles, Congressman Roberts said:

"I don't see any reason why autos should be any more exempt

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C & O Railway Honored Again

CHESAPEAKE AND OHIO RAILWAY, for the second consecutive year, has been honored by the National Safety Council for outstanding safety prcgrams for employees and the general public. Walter J. Tuohy, C&O president (center), receives wall plaque award from Norman A. Olman, National Safety Council district director, as C. M. Schaefer, C&O superintendent of safety and fire prevention, looks on.



This article has been adapted from a report presented at the Conference of Managers in Chicago, October 17, 1959.

J DIMENSIONS IN SAFETY

An operating executive in the industry that gave safety work its start lets us take a threeway look at his own company's philosophy



"Management assumes the responsibl'ity for making every plant road and railway, every building, every machine and process, and every job as accident-proof as possible."

SAFETY is a subject of vital concern to everyone. It is a link that unites all companies in a common effort—the effort to reduce the accident toll and to improve the conditions under which men work and live.

When you compare conditions today with those half a century ago, it is clear that the safety effort has succeeded remarkably well.

Thanks to modern safety programs, a man can take a job in a well-run corporation today with the knowledge that he will be much safer on the job than he is in his home, or driving his car on the highway.

But in spite of our progress, there is still a long way to go. We need still more refinements in safety training, in the design of factories and machines, in safety equipment. We need to re-examine our thinking about safety; to get a clearer view of our goal, and how to achieve it.

That is what I am going to do. I am going to examine the safety picture from three angles: philosophy, program, and communications.

By E. R. JOHNSON

Vice-President in Charge of Operations, Republic Steel Corp., Cleveland, Ohio. Presented before the Metals Section, 47th National Safety Congress, October 21, 1959.

There are many reasons why a safety program can fall short of its goal, but one of the most common is the lack of a clear-cut well-thought-out philosophy of safety.

Have you ever actually written out your company's safety philosophy? It doesn't have to be a complicated document. But it should spell out your company's concept of safety, define areas of responsibility, and clarify safety goals.

Republic's safety philosophy is based on two separate but interlocking ideas. First, men live and work in an environment which can be hostile to them, and they have to be protected from it. Second, men are naturally careless, and they have to be protected from themselves.

By hostile environment I mean not only the world of nature, with its floods and earthquakes; but also the man-made environment of machines, high-tension lines, and furnaces. I mean the roller skate on the stairs, and the automobile with defective brakes.

And when I say careless men, I mean not only the few who are reckless or self-destructive; but also the many who have the attitude "It can't happen to me."

I am sure that every safety program to a greater or lesser degree is designed to overcome both these weaknesses—to protect men from the environment and from themselves. But it helps if you think of

the living and working environment as something that needs to be tamed; to be made foolproof; and beyond that, to think of the men under our care as being unable or unwilling to protect themselves without training and assistance.

When it comes to areas of responsibility, the problem again falls into two parts. In the first place, men are not expendable. We accept primary responsibility for the men at work under our direction. We want to return them to the gate in the same condition as they came in. This responsibility spreads downward from the chairman of the board and the president to every member of the management team. It cannot be evaded because employees without guidance will not or cannot assume responsibility for themselves.

We assume the responsibility for making every plant road and railway, every building, every machine and process, and every job as accident-proof as possible.

We assume the responsibility for training every production employee in safe practices; for making sure that every employee has a full knowledge of job hazards; and for providing him with effective safety devices.

To be sure these principles are accepted by line management, Republic supervisors have the direct responsibility for the safety of the men under them. In other words,



"Men are not expendable. We accept primary responsibility for the men at work under our direction. We want to return them to the gate in the same condition as they came in."

the safety department is responsible for setting up the safety programs, but the supervisors are responsible for seeing that the program is carried out.

In the second place, Republic management is responsible for helping each man assume more responsibility for himself. Helping a man to help himself is a good American principle, and we have applied it to safety with good results.

This area is one that has been widely overlooked in safety practice. Too much attention has been paid to the statistics of success in safety programs, and too little to the reasons behind that success. Some safety departments have not been curious enough about why some men become safety conscious under training, while others do not. In Republic, we have been studying this problem with increasing interest; we think it is one of the most promising areas for future work in the safety field.

The employee who can be taught to assume responsibility for his own safety and that of his fellow worker is the man who holds out promise for tomorrow's safety programs. If we can get a clearer picture of the safe man as distinguished from the unsafe man, we will have taken a major step toward accident-free plants.

As for basic safety goals, our philosophy is simple. We believe that accidents are caused and can be prevented. If a plant can run for 100 days without a disabling injury, that same plant can run 200 days with a perfect safety record.

Someday, good plant design, good machine design, good safety equipment, good training and good practice will come together in focus and give us a practically accident-free industry. That is my belief, and that is Republic's long-range goal.

There is another element in our safety philosophy. We believe that our safety responsibility does not end at the plant gate, but extends to the home and the community. We see our employees not merely as rollers and millwrights, but as home gardeners and drivers of the family automobile. Safety training in the home saves lives and man-

hours just as surely as it does in the plant.

We see our future employees not as statistics, but as boys and girls on the streets, at home, or in school, and subject to the hazards that children encounter as they grow up. If we help them reach maturity without being killed or crippled, it is a net gain for the community.

We have an idea, too, that onthe-job safety training for employees is not the only successful kind of safety training—perhaps not even the best kind. We are interested in developing training programs that begin in the home and extend through the school years programs that will make safe attitudes and safe work habits a basic part of the education process.

Translating a safety philosophy into a workable program is one of the most difficult jobs with which a management team is ever faced. Yet one of the big stumbling blocks to designing a good safety program is that it looks so easy. And it is easy to copy the program from last year, or from some other company. But is this the best program for your company under conditions as they are today?

In small companies, this socalled "easy" job is often dumped on the shoulders of a man who already is carrying a full-time job. Not realizing how tough it is to plan a good safety program, management sometimes classifies safety planning as a spare-time or slacktime job. Sometimes a good program results in spite of this handicap. But often the job is only half done.

In larger companies, the danger is that safety will not be given the proper emphasis in the over-all industrial relations program—especially when it comes to working out the budget and assigning personnel. A neglected safety program grows by improvisation, and fits the needs of an expanding company about as

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Twelve thousand

Safety Men on the GO

at the 47th Congress

Biggest registration yet packs eight Windy City hotels





They heard safety leaders outline problems of the Sixties



Howard Pyle Council's president leads annual meeting.



Walter F. Carey
NSC Board Chairman was
MC at the banquet.



E. J. Thomas Goodycar Chairman spoke at annual banquet.



Gen. G. C. Stewart Local managers hear executive vice-president.

Thousands jammed the ever-popular early morning sessions



These early risers got a seat



Others had to listen from the stairs

Some were old-timers

Some were very young





W. H. Cameron receives Honorary Life Membership in Industrial Conference from R. H. Ferguson, past Conference chairman.



Elementary school children and grownups participate in a panel on the problems involved in a school safety program.



Examining reflective clothing are the Inspector of Factories of East Pakistan and a visitor from the Japanese Embassy.

They learned the painless way through skits



U. S. Steel tells safety story to management with "Mark of ZERO" skit.

... watched experts use tools and demonstrate new techniques



Meet packers show proper technique for boning beef.



Device for teaching mouth-to-mouth resuscitation.



old friends and made new ones



National Safety News, December, 1959

They listened to featured speakers and stayed late for the post-mortem



.. sought help from Council staff



Some got awards



George Steel of Ralston Purina Co. receives an engraved sterling silver bowl from the Food and Beverage Section on the occasion of his Distinguished Service to Safety award.

Congress ends with a "bang"

. . . hundreds of bangs, ectually. John Shirley and Bonnie Dale gave partygoers the most exciting finale ever. They released hundreds of balloons after showing the audience how to shoot them straight up from an extended finger. The crowd kept 200 balloons in the air. This is the act that went to Russia with Ed Sullivan, but they had to give it up. Russian audiences got out of control.





Shopping at Safety's Big

Representing
188 makers and
distributors of
safety products
and services,
this was the
largest show of
them all in '59...
from personal
to plant protection. You name
it. It was probably there.

FROM A FINGER COT to a space suit, almost anything that had a safety application could be found at the Exposition that drew thousands of interested visitors throughout the week of the 47th National Safety Congress.

Here delegates had an unequaled opportunity to look over new offerings in the safety field and discuss problems with manufacturers and distributors. The Exposition also was an excellent meeting place for delegates whose meeting activities were scattered over eight hotels.

Represented this year were 188 manufacturers and distributors of safety products and services forming the biggest safety show of the year. It filled the vast exhibit halls off the lower lobby of the Conrad Hilton Hotel and additional space adjacent to meeting rooms on the mezzanine and third floors.

Each year the Safety Exposition

has been a conspicuous indicator of safety's progress. Safety equipment has kept pace with the growing need for more effective protection, as modern life has become faster and more complex.

Some of today's problems didn't exist when the first Safety Exposition was held in connection with the 1916 Congress at Detroit. As far as industry generally was concerned, radioactivity was then little more than a scientific curiosity. Deafness was something that afflicted boiler-makers, and there wasn't much that could be done about it. These hazards have resulted in increased attention to both personal protection and to the control of hazards at the source.

Products on display covered the prevention of accidents, protection of life and property from fire, firstaid and medical services, maintenance of plant and personal cleanli-



This attractive young miss graphically demonstrated the ups and downs of life in a hoist for Wright Hoist Division of American Chain and Cable Company.

Who and What Was There!

EXHIBITORS AND PRODUCTS

Acme Protection Equipment Co.-Respiratory protection.

Advance Glove Manufacturing Co.-Work gloves.

Aetna Casualty & Surety Co .- Safety literature and films.

Akron Brass Manufacturing Co.—Fire-

fighting equipment

Alan Wood Steel Co.-Abrasive steel floor plates.

American Allsafe Co.-Sweatbands and emergency lock release.

American Biltrite Rubber Co.-Rubber, composition, and neoprene soles.

American Brattice Cloth Corp.-Warning lights and signals, ventilation tubing, and flame-resisting curtains.

American Chain and Cable Co.-Chain and wire rope slings and assemblies.

American Industrial Safety Equipment Co. Face shields, goggles, gloves, and mittens.

American LaFrance Corp.—Fire-fighting equipment.

American Optical Co.-Head, eye and respiratory protective equipment, safety clothing and specialty products.

American Optometric Assn.-Eye conservation programs. Ampco Metal, Inc.—Non-sparking tools.

Award Incentives, Inc.-Plaques, trophies,

ment.

Antrex Corp.—Portable communication equipment, megaphones, radios and record-

Ansul Chemical Co.-Fire-fighting equip-

emblems, badges, advertising specialties

Bashlin, W. M., Co.-Linemen's and industrial safety equipment.

Bausch & Lomb Optical Co.-Safety glasses and sight-screening equipment.

Beltone Hearing Aid Co.-Audiometers and hearing-aid tests.

Beryllium Corp., The-Non-sparking tools. Best, Alfred M., Co.-Safety publications. Bethlehem Steel Co.-Wire rope and slings

Bil-Jax, Inc.-Metal scaffolding and ac-

Boyer-Campbell Co.-Personal protective equipment, protective creams, waterless hand cleaners.

Brady, W. H., Co.-Self-sticking signs and markers.

Brossard, Lester L., Co.—Traffic mirrors and traffic-lane markers.

Brown, Paul, Fyre-Block Sales, Inc.--Fire protection for motor vehicles.

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Show

ness, prevention of falls, occupational hygiene, and aids for safety training and communication.

Personal protection continues to be the largest single group of equipment, being featured in some 40 per cent of the exhibits. Protection for practically every part of the body was offered in the wide range of products.

Some of the exhibits were safety department stores, carrying items that included almost everything needed in an industrial safety program except the more specialized equipment.

Plant protection came second with impressive displays of fire extinguishing apparatus, sprinkler systems and accessories. Safety solvents and equipment for handling and storage were prominent in the exhibit.

Several exhibits featured equipment and supplies for plant maintenance and sanitation and personal hygiene. Among these were products for floor treatment to maintain cleanliness and reduce slipping hazards.

Some lines of equipment are equally important in safety and in operation. In this group are the many devices for handling material and wire rope, chains, slings, and accessories were well represented. Also of interest to both groups were the exhibits of ladders, scaffolding, work platforms, and walkway ma-

First-aid and medical displays covered a wide variety of equipment for the industrial user, including first-aid and snake-bite kits, resuscitators and breathing equipment, and apparatus for transporting the injured.

Communication and safety services included publications; awards; training aids; and warning, instruction, and direction signs.

In a central spot in the lower lobby was the National Safety Council's exhibit of services and publications and displays of the various Council divisions. Representatives of the Council library and the membership service division were on hand to take care of the many requests for information.

An expert on machine guarding and the man generally regarded as the dean of exhibitors, H. W. Beegle explains some of the finer points of his specialty during the recent 47th National Safety Congress and Exposition. In years before the Exposition, Mr. Beegle showed guards to Congress delegates in the hotel corridors.





During the five-day span of the Congress, this scene took place many times, as radio and TV news commentators gave full coverage to Congress activities.

Those who couldn't make it to the Congress could stay at home and read about it, watch key participants on TV interviews, or hear them on radio programs

Media Pass the Word on Congress

WHEN 12,000 PEOPLE, charged with the spirit of safeguarding their fellow man, suddenly flock into the Midwest's busiest city, it's news. Describing this humanitarian invasion to the public took some doing, but mass media did it—and well!

Resulting comprehensive coverage of the 47th National Safety Congress and Exposition focused the nation's eyes on 300 participants in 900 sessions during this "Safety in the Sixties" event.

In the October 19-23 span, 56 newspaper correspondents, radio-TV representatives, and trade journal writers sent thousands of words and pictures to their media. Wire services, consumer magazines, and house organs also picked up stories.

Congress coverage required detailed pre-planning by the NSC Public Information Department during the 12 months after the past year's event. And as an added burden successfully shouldered, PI personnel scheduled and conducted special safety activities on radio and television.

Outstanding communication feature this year was a series of Monday-through-Friday-night radio programs on Chicago station WMAQ. Titled "Look Alive," this series



Above: Ray Ashworth (left), NSC's Traffic Conference chairman, gave the traffic safety story on Chicago's WMAQ in a week-long radio series saluting the 47th Congress. NBC's Jim Hurlbut (right) produced the series.

Below: One feature receiving wide attention from the press, radio, and TV during the Congress week was a demonstration in which a bus-load of school children simulated an emergency and evacuated the vehicle safely and quickly before photographers.



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Heard at the Congress

Follow Through!

Most plants provide their operators with protective equipment. But how often do they follow up and insist that the equipment be used. Make it a policy that the equipment be used and maintained in usable condition; if not, the negligent person should be held responsible.—Emerson M. Jones, Allied Chemical Corp. (Fertilizer)

Reaching the Family

We extend our safety program beyond the plant into the home of each employee. We try to demonstrate to the whole family the genuine interest we have in making our plant a good place to work because it's a safe place. The family plays a part in our safety program because they stand to benefit from its successes.—Ronald O. Warner, Operations Manager, General Motors Pressed Metal Div. (Power Press and Forging)

Safety Ambassadors

The attention we give to the safety of workers is such a departure from the age-old disregard for human life and suffering that the spotlight of favorable opinion is focused on us in foreign lands.—
Howard J. Schulte, Safety Engineer, U. S. Corps of Engineers.
(Construction)

Convincing Proof

Accident investigations do more than just reveal where and why an accident occurred. They also help convince employees that you mean what you say about safety . . . Our safety section employs 18 persons—one for every 800 workers. Safety costs our company about \$1 a month for each employee.—John F. Jones, Safety Supervisor, Commonwealth Edison Co. (Radiation Hazards)

Hindsight Engineering

It's time for safety engineers to begin practicing safety engineering by foresight, not hindsight. For too long we have been telling people what they should do to prevent accidents—after the accidents have happened.

Every time a new piece of equipment comes out, we sit back and wait to see what happens. That's hindsight engineering.—Earl W. Wheeler, Safety Engineer, U. S. Navy Dept. (Construction)

The Men We Send Overseas

A good overseas construction manager must be diplomatic, stable, self-reliant, tolerant, patient, and capable of handling a broad range of problems. In addition, he must be a highly-qualified construction man. The wrong man on an overseas construction job can cause irreparable damage.—George F. Ferris, President, Raymond International. (Construction)

The Pace-Setter

The boss must be the pace-setter who sets the stage for safety of operation. The person who just gives lip service to personal safety does as much to retard it as he does to help it.

If your place is to be safe, the boss must not only believe in safety; he must take an active interest and set an example.—F. M. Acker, Manager, Old Hickory Plant, E. I. duPont de Nemours & Co.

IDEAS THAT WORKED

Devices and Ideas to Help Your Safety Program

By Arthur S. Kelly, Industrial Department, NSC

Harness for compressed gas cylinder



OLD WAY-UNSTABLE



NEW WAY-SOLID



A SAFER way to secure cylinders of compressed gas in use has been developed by Mr. E. P. Carter, research shop group leader, and Mr. Harold Waugh, shop technician, Chemstrand Corporation, Decatur, Ala. The frame provides a steady mooring for the cylinders.

At the left, Mr. Waugh shows what could happen with the previous method.

Mr. Waugh and Mr. Carter are shown at the right demonstrating how a frame straps the cylinder securely in place as the device is clamped to the bench. The center illustration shows the mooring frame structure.

The C-clamps are welded to the section of pipe which allows adjustment to platforms of varying height.

NOVEMBER WINNER

WILLIAM G. SMITH'S idea, "Pallet Rollers," took the prize last month. Mr. Smith is safety director at the Nestle Company, Fulton, N. Y. His idea makes it unnecessary for material handling truck operators to drive into freight elevators. The roller moves inside the elevator on a track. The fork lift truck operator places the pallet on the roller from outside the elevator.

Price is right for quiz contestants

AN ADAPTATION of the well-known Doctor I.Q. radio program quiz has been developed at the Halifax Paper Company, Roanoke Rapids, N. C. Prior to meetings, the wife of one of the foremen or employees is contacted and, in complete secrecy, records on tape statements that might go like this:

- 1. I am a company foreman's wife.
- 2. My husband's crew had only two work accidents in the past seven months serious enough to require a doctor.
- 3. They have lost very few days due to off-job accidents in the past 12 months.
- 4. They have had no disabling injuries in the past 43 months.
- 5. He is definitely married and has four children.
- 6. He works in No. 1 Paper Mill.
- 7. He is a tour foreman.
- 8. He has worked at Hapco since 1938.

During the meeting, the first statement is played back and the foremen try to guess the name that goes with the voice. One additional statement is run each time, so the identity becomes easier as the game proceeds. If they guess right after the first statement, they receive nine silver dollars. Lesser amounts are awarded as additional clues are revealed.

In one case, the identity was not picked up by the husband, but by another foreman—at the seventh step. This idea was used in plant safety meetings and proved most entertaining. Submitted by Ray Smith, assistant personnel manager.

Barricaded areas

AREAS which must be isolated by barricades are often roped off without explanation. In such cases, employees, not knowing the real reason for the barricade, often ignore this warning device and crawl into the barricade and walk into the areas enclosed. Mr. T. C. Downs, safety inspector for Gulf Oil Corporation at Port Arthur, Texas, solved this problem by using scrap hoisting rope to barricade the area. Mr. Downs painted the rope black and yellow in alternate sections. Further, he hung canvas signs indicating the specific hazard at frequent intervals around the perimeter of the barricaded area. Foremen now have these devices as standard equipment.





news briefs

TV and OTJ

The question is, just how far do we go with this off-the-job thing? A painful muscular disability known as "television bottom" is afflicting TV buffs with bad posture. First word of the new ailment came from a Kentucky doctor who reported it—with a straight face—to the International College of Surgeons.

Guards study first aid

The company physician at the Hammermill Paper Co., Erie, Pa., trains members of the plant protection department in first aid. The course consists of 20 demonstration lectures held once a week. The students use a textbook and weekly lesson outlines.

Aggressive water

Not all plastics are suitable for pipe meant to carry drinking water. Some water, which is slightly aggressive chemically, though still fit to drink, can extract toxic substances from the plastic. The hazard to health is obvious.

Author is arsonist

Baltimore arson investigators, suspecting that a \$100,000 lumber yard fire was set by a juvenile, went to the English teachers in a nearby school for help. The teachers assigned the task of writing a theme on "The Recent Fire in our Neighborhood." One boy turned in such a complete report that he was selected for questioning. He confessed.

Office fire

Office mechanization brings with it hazards found only on blue-collar jobs a few years ago. A girl who was filling the reservoir of a duplicating machine with a flammable solution put in too much fluid. The overflow vaporized and, since the machine had been left running, caught fire. Luckily for her, she had spilled no fluid on her clothing.

Pallet standardization

Materials handling is about to catch up with Eli Whitney and his cotton gin. Standardizing sizes of pallets from the current 300 different sizes to 11 standard sizes for all purposes will give major economies. Mass production of pallets will be possible. Employers can make better use of warehouse and rolling stock space. With only a few sizes to stock, users can send pallets back loaded with finished goods rather than "deadheading" them back.

Packers, posture, production

A bright office equipment salesman convinced the management of a candy manufacturing company that secretarial chairs would help solve some of their problems. They put posture chairs on the production line, and within a month production was up one-third, and the absenteeism problem had disappeared.

Backfire fires gasoline

A utilities crew had trouble with a stalled truck. They took off the carburetor, drained it, reinstalled it, and primed it with gasoline poured from a paper cup. Overwhelmed by the generous gulp of fuel in the carburetor, the engine backfired and set the cup of gasoline afire. The man holding the cup naturally got rid of it as soon as possible. The flaming cup hit the foreman in the leg, causing second degree burns.

Vanadium residue

Boiler cleaners are exposed to vanadium oxide irritation if the boiler has been fired with certain Bunker C fuel oils. Men on this job should be fully clothed and wear gloves, goggles, and respirators.

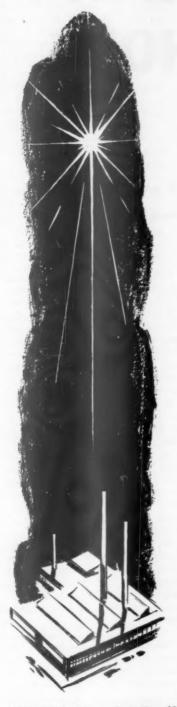
Hot beef

A Fire Prevention Week observance in Philadelphia was thrown off schedule when a moving mock-up of Mrs. O'Leary's cow developed a short circuit and began giving off pungent blue smoke.

Jim Saul

Factory on Christmas Eve

By BILL ANDREWS



Along the streets in town. A thousand windows shine with colored lights and tinselled bells. Few lamps are left to shine upon the hill And light the hundred-windowed plant on Christmas Eve. Within the factory, the unmanned shops Are dim and quiet, and the ranked machines Lie like sheep slumbering in a field. There is no need now for steel-mesh shield Covering the still flywheels and the belts. The delicately wrought die-guards are, for a moment, Useless, because the jaws they muzzle do not snap. The litter of a thousand parlors, the litter of ribbon, Gaudy paper, fir branch, and holly leaf, Stands in sharp contrast to the ordered aisles Gleaming clean under a few scattered lamps. And the slow, tired, lonely steps of old men On the long night rounds Are contrast to the hurried younger steps Of people packing, decking, dancing in the town. Life has slid out of the shops like a receding wave. Revealing for the brief hours of holiday, The bare beach of their working place-The bare and weathered beach of working life. It is a subject worthy of some meditation For those whose calling is the fight To keep the shop in safety and in health That the laughter in the town tonight Is, in some part, the fruit of their long labor. The now-useless shield and guard may well Have some relation to a sleeping child's tomorrow. And to the safety man, himself caught up In all the great rejoicing of this night, There is security in the unsleeping safeguards That keep the plant safe in its deserted hour. If the machines are slumbering sheep, The sprinklers are like quiet but unsleeping dogs; The watchmen are the shepherds. So, for us who labor against the blight Of accidents and pain and death, There is a satisfaction on this snow-decked night To know that on the hill there is not much to fear. And if, from time to time, we think That all our achievements in our work Are gifts from us to a half-appreciating world, It may, on this night of all nights, To recall what lies behind the tinsel and the lighted trees; To think a moment of the Babe who lay Unsafe in manger hay To show His power and His beauty to Some shepherds from the hills, And to save such men as we, who find in Him The power to work for those He loves.



The Convincing Case for

SAFETY SHOES

There are thousands of ways to mangle toes, and one excellent way to protect them

—wear safety shoes. The shoe above saved the wearer's toes from a rotary mower

PARTS OF THE BODY for which protection is widely used are involved in a relatively low percentage of both disability cases and total compensation payments. The feet are a conspicuous example, thanks to the widespread use of safety shoes.

Toes, it is estimated, account for some 80,000 disability cases a year. This total amounts to about 4 per cent of all accidents and 2 per cent of the total compensation paid.

A survey of 233 companies employing a total of 815,000 workers, made by the National Safety Council, revealed 1,813 toe injuries. Of these, 336 were disabling and 1,477 were non-disabling. Of those injured while wearing safety shoes, there were 661 cases, of which 119 were disabling. Of those involved in these accidents, 63 per cent were not wearing safety shoes; 60 per cent

By CLIFFORD F. BURRIS

Safety Director, International Business Machines Corporation, Endicott, N. Y. This article has been adapted from a paper presented at the 29th Annual Safety Convention of the Greater New York Safety Council.

of the companies did not require them.

Part of foot injured. Considering only those who were wearing safety shoes, we find that only 7 per cent involved the second, third, and fourth toes which are mainly covered by the toe cap. The great toe was involved in 24 per cent of the cases, the little toe in 21 per cent, and other parts of the foot in 48 per cent.

It was found that 85 per cent of injuries to the great toe were due to impact behind the cap. It was further found that 91 per cent of the cases involving the little toe were also due to impact beyond the toe cap.

Because these data seemed to indicate that a large proportion of the injuries occurred beyond the protective area of the toe cap, the factor was further investigated. It was found that only 27 per cent of the cases reported had struck behind the cap. Seventeen per cent struck the cap but only cut the leather; 31 per cent caused no damage to the cap; and the remaining 25 per cent ranged from a dented cap to a crushed cap.

Extent of impact. Falling objects ranged from 2 lbs. to 60,000 lbs. Objects fell from as high as 18 ft.

Activities engaged in when the accidents occurred covered a wide range of industrial operations. Handling material was responsible for some 39 per cent of the cases; operating machines and power tools accounted for 10 per cent.

It was evident that the safety cap furnished adequate protection for the areas it was intended to cover and within the tested limits of its capacity. Whether a toe cap could be designed to give more complete coverage to the great toe and the small toe is a moot question. There might be difficulties in fabrication and there might be loss of flexibility.

We might assume that many cases of objects falling on toes were not reported, since the toe cap prevented injury. This information, unfortunately, would be practically impossible to collect on any adequate scale.

Standards. With the help of the government and many shoe manufacturers, the American Standards Association has established stand-

ards for safety shoes. For industrial use they must be solid, well-made work shoes. The toe box is incorporated during construction and rests on the sole of the shoe.

The toe must be capable of supporting a static load of 2,500 lbs. and withstanding the impact of a 50-lb. weight dropped 1 ft. The inside of the toe box must not come closer than ½ in. to the upper surface of the sole under either of the above tests. So far, only metal toe boxes have withstood these tests. Strength requirements for both men's and women's shoes are identical.

Special types. Metal toe boxes may be used in special types of shoes, such as conductive, non-sparking, molders', or nonconductive (with nonmetallic soles and heels). Rubber footwear with steel box toe should be worn for work under wet conditions.

Extra protection. To protect the feet from the heaviest impacts, foot-guards should be worn in addition to safety shoes. These guards, made of heavy-gauge flanged and corrugated metal, protect the feet from toes to ankles. With the flange resting on a firm floor surface, the foot guard should resist an impact of at least 300 ft.-lbs. without sufficient deformation to damage the shoes underneath or injure the foot.

Safety shoes of the "congress gaiter" type are used where employees are exposed to splashes of molten metal. Having no fasteners, these shoes are quickly removable in an emergency. Some companies engaged in foundry and steel mill operations have reported that serious burns have occurred to men, unable to remove ordinary types of shoes quickly. In such operations, the tops of the shoes should be covered by trouser legs, spats, or leggings to keep out molten metal.

In some industries, such as construction, where there is increased hazard from protruding nails and only remote chance of contact with energized equipment, shoes may be equipped with reinforced soles or inner soles of flexible metal.

Shoes of stitched and cemented construction, which provide good insulation, should be worn by electricians.

For wet conditions, as in dairies and breweries, where rubber foot-

wear may not be desired, leather shoes with wood soles or woodsoled sandals worn over shoes are effective.

Wood-soled shoes provide good protection on jobs which require walking on hot surfaces which are not hot enough to char the wood.

Applications. The safety-toe shoe is generally thought of in connection with handling heavy material. However, there are other industrial applications:

- Management and engineering personnel working in areas such as machining, also clerical employees, such as mailboys and timekeepers who must enter manufacturing areas.
- 2. Employees engaged in building services and plant protection.
- Assembly operations where relatively light parts are put together to form heavy subassemblies.

Outside of industry, foot protection is desirable in:

- 1. Farming.
- 2. Home workshops.
- 3. Operating power lawn mowers.

Fitting employees. Many companies have set up shoe departments in their plants with the aid of shoe manufacturers and provide trained men to fit employees with shoes of the correct type for the hazard involved.

Subsidy programs. In addition to supplying a shoe department, many companies subsidize the cost of safety shoes. Some of the plans are:

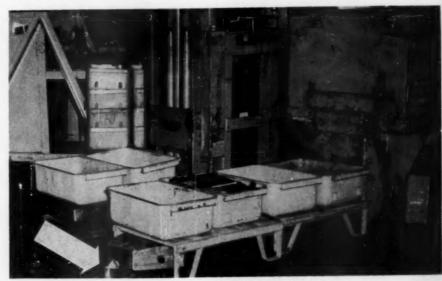
- Purchasing shoes directly from the manufacturer and supplying them to employees at a reduced price or at wholesale cost.
- Allowing the employees to purchase shoes from a vendor of his own choosing and allowing him a specified percentage of the cost.

Most companies require the employee to obtain approval from his supervisor for reimbursement. Payroll deduction plans are an additional incentive.

Promotion programs. Use of safety shoes is promoted through the following media:

- 1. Company newspapers.
- 2. Bulletin board posters.
- 3. Films.
- 4. Booklets.
- 5. Exhibits.
- 6. Shoe clubs.
- 7. Demonstrations.

However, along with the above, a subsidy program seems to work best. It indicates that the company has confidence in safety shoes and that it is interested in the employees' safety.



Employee was removing pan from skid when trucker lowered platform on his safety shoe.

HAND PROTECTION FOR EVERY JOB

Top, left to right: Asbestos glove, loop pile, and aluminized glove, all for handling hot materials; 18 oz. cotton glove and loop pile glove for general shop wear.

Second row: Plastic-dipped glove for excessively oily work; fine rubber glove for protection against acids or caustics where finger dexterity is required; neoprene gauntlet for use with caustics and acids; neoprene and cork-dipped glove for slippery and oily material; chrome leather gauntlet for arc welding.

Bottom row: Neoprene sandwich palm pad for protection against sharp edges; asbestos palm pad for hot sharp edges; brass-studded palm pad for heavy material handling; open-backed leather palm pad for annealing operations.

An adequate program of hand protection will keep those digits out of a lot of trouble



TEN-FINGER SAFETY

HAND PROTECTION is definitely not new!

Centuries ago, warriors used formed-steel gloves to ward off the sword blades of their foes. Medieval knights wore mailed gloves in battle. And in falconry, hunters gloved themselves against the talons of their trained birds of prey.

Today in industry we still find hand protection essential, especially in the light of mounting hand and finger accidents among the nation's workers.

For instance, the U.S. Department of Labor reported that in 1957 there were almost 2,000,000 industrial disabling injuries. Of these, 750,000 involved disabling hand injuries.

This report also named 30 per cent of all industrial injuries as hand

injuries. In the metal press and stamping business, 91 per cent of injuries are hand injuries. And 60 per cent of all hand injuries are not due to "an agent of machinery."

Other statistics back up these facts. Consider the 1954 figures available from 11 state departments of labor. Finger, hand and arm injuries represent 34 per cent of all injuries reported; these same injuries accounted for 26 per cent of all conpensation payments.

Trunk injuries were next in line with 27 per cent of the total injuries, representing 32 per cent of all payments for compensation. For comparison, eye injuries totaled 3 per cent of injuries and the same percentage of compensation payments.

Of the total 1,950,000 injuries, 660,000 were hand, finger and arm injuries. Average cost of a thumb or finger injury is \$314. Average cost of a hand injury is \$377, based on national figures.

As added factual frosting, a February 1959 NSNews article concerning Virginia's accident record pointed out that, of a given 1,000 injury cases, 270 or 27 per cent of all injuries surveyed were hand injuries. These included finger accidents and represented 31.5 per cent of the total cost for all injury cases.

Such statistics may give a broader perspective to the nationwide importance of the hand protection problem.

In our company a survey of all injuries indicated 48 per cent of all injuries recorded were hand or finger cases in a certain three-year period. These represented more than 65,000 total injuries.

Hand and finger protection is a vital proposition in our firm. We have four main plants and seven subsidiary operations, with about 20,000 workers in 10 cities. Our products include automotive component parts, automobile and truck wheels and bodies, brake drums,

By THOMAS H. BULLARD

Safety Manager, The Budd Company, Philadelphia.

streamline rail cars, missile parts, jet engine assemblies, testing and measuring equipment, nuclear products, many types of fiber items and numerous other products.

We handle thousands of tons of metal stampings each year, and a great proportion of this metal must pass through the hands of the people in our shops. Plant operations include metal pouring, square shearing, punch pressing, electric-arc welding, spot and electronic welding, metal forming, machining of metal castings, and other types of work familiar to our industry.

The company provides gloves, hand pads and arm guards to employees where required for protection on the job and at no cost to the worker. This has been our policy for the past seven or eight years.

And more persons in our organization are using gloves now, when provided without charge, than ever wore them when employees had to buy gloves. In fact, we must constantly be on guard to see gloves are not used on jobs where they might create a hazard (on rip saws, roller straighteners, etc.)

Basically the cost of gloves, hand pads or arm guards must be weighed against the cost of an injury without their use. For example, in Pennsylvania workmen's compensation will pay \$536 for the loss or loss of use of a little finger, \$1,313 for an index finger and \$2,250 for a thumb. You could buy a good many pairs of gloves or hand pads for one finger or thumb loss.

In the same state the law says gloves shall be provided for all work involving caustics, molten metals, sharp or rough edges, corrosive or hot work.

Once in our small parts division we were faced with furnishing gloves to 18 workers, because metal stampings with heavy burrs on them were coming from the presses and square shears. These employees had to follow up work on the stampings on press brakes and inspection jobs.

By placing two workers on the belt-sanding operation, we found the 18 employees didn't need gloves, because the belt-sander removed the burrs from the metal stampings. We also had improved or sharpened cutting edges on the shear blades and press dies, so burrs were not as great a menace.

An 8-Point Plan for a Safe Budd Plant is a part of each of our plant operations. Issued by Edward G. Budd, Jr., company president, this plan sets the safety policy for every plant in our organization. There can be no deviation from this firm

This system requires every supervisor in a plant to talk on a safety subject to at least two of his employees each day. Each plant must have an Executive Safety Committee, consisting of assistants to the plant manager and all division managers.

The group meets monthly, reviews the previous month's safety record, and makes necessary safety recommendations. There is also provision for safety training for all employees and supervisors. Hand protection is involved in this training.

Just as the supervisor is the key man in any safety or production program, he is the key man in any glove program. If you haven't sold him on the savings to the company of efficient operation in his department, there isn't much use in trying to keep him economy-minded in hand protection benefits.

If he doesn't control the cost of gloves, hand pads, or arm guards in his department, the supervisor must realize he's not going to mind high costs of poor workmanship by his employees.

We've found it's valuable to indi-—To page 75





Above: Worn out? A ticket from the foreman will get him a new pair. Left: Gloves, armguards, and palm pads provide protection when handling sharp-edged stamping. Two-hand press control and eye protection also are standard.

A NATIONAL SAFETY COUNCIL TECHNICAL SERVICE

TITANIUM

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- 1. Titanium is a strong, soft, ductile, silvery-gray metal. Classified as a light metal (0.16 pound per cubic inch), it is approximately 60 per cent heavier than aluminum (0.10 pound per cubic inch) but only 56 per cent as heavy as alloy steel (0.286 pound per cubic inch).
- 2. Titanium is the fourth most abundant of the elements commonly used as structural material, being exceeded only by iron, aluminum, and magnesium. The principal sources of supply for titanium are the ore minerals of rutile (titanium dioxide), ilmenite (iron titanium oxide), and slag obtained from upgrading ilmenite. Ilmenite is more abundant than rutile, but less desirable because it requires more processing.

Physical Properties

- 3. Titanium melts at 1,668 C (3,034 F). Its specific gravity is 4.5, and its atomic weight 47.90. The metal is highly active. It absorbs hydrogen above 149 C (300 F), oxygen above 705 C (1,300 F), and nitrogen above 815 C (1,500 F), with the degree of absorption increasing rapidly at higher temperatures.
- 4. Titanium is highly resistant to corrosion, and in most cases is more corrosion-resistant than specialty steels. It can be welded (under an inert atmosphere), forged, rolled, and hot worked.
- 5. Titanium in sheet or other solid form resembles polished steel.

This Data Sheet is one of a series published by the National Safety Council, reflecting experience from many sources. Not every acceptable safety procedure in the field is necessarily included. This Data Sheet should not be confused with American Standard Safety codes, federal laws, insurance requirements, state laws, rules and regulations, or municipal ordinances.

When it is applied to a grinding wheel, distinctive sparks are produced. The white lines traced by the flying sparks end with a burst that produces brilliant white rays or branches.

When soft titanium is moistened and rubbed on glass, it leaves a distinctive gray-white mark.

Hazards of Titanium and Its Compounds

- 7. Titanium is combustible under certain conditions. It presents a fire hazard during production of the raw sponge, casting, or machine operations that produce fine turnings or chips, powder production, and handling of scrap which contains fines or dust.
- 8. In tests conducted by Underwriters' Laboratories, titanium in the form of very fine chips, drillings, and turnings was ignited by a match and burned with a brilliant white flame. The ignition tempera-

- ture of powdered titanium in quiescent layers is reported to be 460 C to 510 C (850 F to 950 F) in air, 550 C (1,022 F) in carbon dioxide, and 760 C (1,400 F) in nitrogen.
- 9. At red heat, 704 C (1,300 F), titanium decomposes steam to free hydrogen. Under these conditions, the freed hydrogen either burns or explodes. Above 802 C (1,475 F), titanium burns readily and vigorously in atmospheres of pure nitrogen.
- 10. Powdered titanium was found to propagate an explosion when disseminated in air in concentrations of the order of 0.045 to 0.070 ounce per cubic foot, or more, in the presence of an electric spark as the source of ignition.* Pressures as high as 86 pounds per square inch were developed by explosions of powdered titanium dispersed in air in a small test bomb. Powdered titanium may also be ignited by accumulations of static electricity.
- 11. The flammability and explosibility of powdered titanium dispersed in air have been classified as comparable to those of finely divided aluminum and magnesium powders. There has been one report of ingot metal rapidly oxidizing in a reheating furnace when the metal was in contact with large

^{*}Inflammability and Explosibility of Metal Powders, Reports of Investigation 3722, October, 1943; U. S. Bureau of Mines Publications Distribution Section, 4800 Forbes St., Pittsburgh 13, Pa.

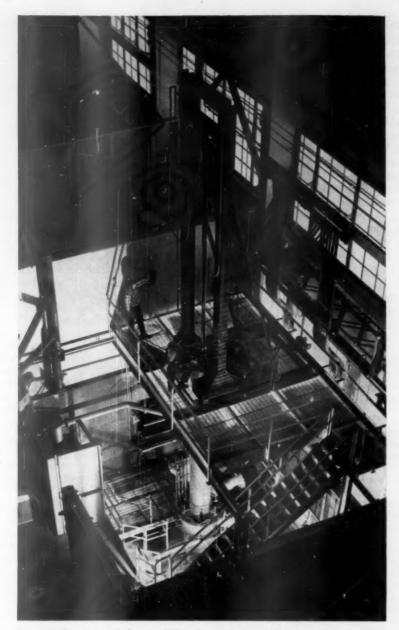


Figure 1. Titanium melt furnace. When furnace is in operation, no one is permitted within the barricaded area.

quantities of semi-molten ferrous scale during mill processing of titanium.

12. Pure titanium dichloride (TiCl₂), a powder, is highly pyrophoric in ordinary air at room temperature. In inert gas at atmospheric pressure, breakdown of TiCl₂ powder into titanium tetrachloride (TiCl₄) and finely divided metal is very slow below 750 C

(1,382 F), but increases rapidly as the temperature increases. The fine titanium produced may ignite in air.

13. Titanium trichloride (TiCl₃) behaves in a manner similar to that of titanium dichloride, but is not pyrophoric at room temperatures. Rate of disproportionation to TiCl₂ is relatively slow below 500 C (932 F) at atmospheric pressures.

14. Titanium tetrachloride (TiCl₄)

is a colorless, extremely corrosive liquid. It fumes strongly when exposed to moist air, forming a dense and persistent white cloud which is irritating to the mucous membranes. Since the smoke is pungent, it is unlikely that a person would breathe any considerable amount unless he were unable to leave a confined area.

15. When titanium tetrachloride comes in contact with moisture, it forms hydrochloric acid and titanium oxides and oxychlorides, with production of considerable heat. The hydrochloric acid, together with the heat, creates a burn hazard.

Uses

16. Commercially pure titanium and titanium base alloys are available in the form of sheet, strip, plate, wire, bar, rod, forging billets, and forgings. Welded and drawn tubing is also obtainable.

17. Titanium is used in high-compression engines and in the air-craft industry for ducts, shrouds, fire walls, skins, ribs, and fasteners. It is also employed in high-temperature piping, gas turbine compressor blades, steam turbine reactor blading, rocket components, equipment for the food and processing industries, and chemical and marine industries.

18. Dental and medical uses for titanium result from the fact that it presents no health hazards. The U. S. Bureau of Mines reports no known reaction from the handling of titanium during a period of five years. Titanium ingested or injected into the skin or muscle produces no unusual effects. One hospital implanted a piece of titanium in a rat's brain, and a year later that rat was as sprightly as his brothers.

19. Several dental houses are fabricating orthodontic appliances from titanium, and several physicians are investigating the use of titanium prostheses for replacing the head and neck of the femur in cases of arthritis and broken hips.

Shipping Regulations and Containers

20. Special precautions must be taken in the shipping of titanium

powder because of its flammable and explosive quality. When shipped wet, with no less than 20 per cent of water, the powder must be packed in metal cans no larger than 10 gallons each and made of not less than 22 gauge metal. The cans must be placed inside wooden boxes, one can to a box, and must be securely closed.

21. Where specific orders do not permit wet shipment, recommended practice is to use double containers securely sealed and packed. The inner containers are flushed with inert gas before being filled.

22. Since titanium powder is listed as a flammable solid, Interstate Commerce Commission shipping regulations* require that a yellow label be affixed to each container. ICC packaging specifications must be followed.

Storage

23. Titanium chips, turnings, and other fines which are to be salvaged or stored should be placed in covered, plainly labeled, clean, dry steel containers. The containers should be removed to a detached, fire-resistive or noncombustible building with adequate provision for explosion venting. Explosion vents should be equivalent to thin glass windows or skylights with a total area equal to at least 1 square foot for every 15 cubic feet of room volume.

24. Titanium sponge should be stored in covered, clean, dry steel containers, in such a way that they may be removed quickly if one drum should catch fire. No serious hazards have been encountered in the storage of sheets or bars. They should, however, be kept free of oils or dust. Drum storage may also be provided in a clean yard area well removed from buildings.

Control of Fire and Explosion

25. Water-base coolants are rec-

*Agent H. A. Campbell's Tariff No. 10, Interstate Commerce Commission Regulations for Transportation of Explosives and Other Dangerous Articles by Land and Water in Rail Freight, Express and Baggage Services and by Motor Vehicle (Highway) and Water, Including Specifications for Shipping Containers.

ommended for all lathe work with titanium, to prevent ignition of chips and turnings. Temperatures at the tool face may be as high as 1,079.1 C (2,000 F). Heat generated on heavy cuts has been known to ignite oil-base coolants. In machining, especially designed lathe tools are necessary for satisfactory work with titanium, and they must be kept sharp.

26. Grinding operations should be performed only in the presence of negative-pressure hoods connected to wet-type dust collectors. The sludge should be removed from the collectors at the end of each turn or at the completion of a job, whichever occurs first.

27. Mineral acids and molten alkali salts used to remove oxides or scale formed on titanium during forging, hot rolling, or other processing may react violently with the metal at certain temperatures.* Thin sheets of titanium have ignited in salt baths. Under these conditions, ignition can be prevented by proper control of temperature.

28. Since titanium dichloride burns rapidly in air and is decom-

*Investigation of Accident Involving Titanium and Red Fuming Nitric Acid, Information Circular 7711, December 29, 1953, Published by U. S. Bureau of Mines. posed by water, it must be kept free of air and moisture, preferably under an inert gas atmosphere.

29. Sampling, pouring, or blowing off of titanium tetrachloride should be done outdoors. When drums of this material have been standing in the direct rays of the sun or in high-temperature areas, they should be vented before being opened. The large bung of a drum should be turned slowly until vapor begins to escape. All vapor should be vented before the bung is opened farther.

Fire Extinguishment

30. Where titanium is used in forms that are readily combustible, sound fire prevention measures are necessary. Such measures include good housekeeping and, where possible, the storage or handling of only small amounts of the metal.

31. Ordinary extinguishing agents are not effective on burning titanium. Carbon dioxide extinguishers are of little value because dust clouds of titanium will burn in an atmosphere of carbon dioxide. A foam extinguisher will not control a titanium fire because of its water content. Carbon tetrachloride has not proved effective in any of the test fires reported.

32. Dry chemical powder or flux may be used as a ringing agent around burning titanium, but it

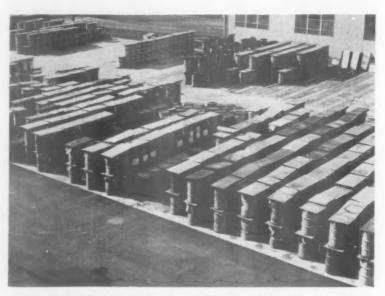


Figure 2. Typical storage area for titanium sponge. Note closed metal drums.



Figure 3. Handling titanium sponge with completely grounded equipment.

will not extinguish a large fire. Small fires in titanium powder can be controlled by isolating the burning portion, ringing it with the powder or flux, and allowing it to burn itself out.

33. Titanium fires confined to small rooms, drums, or other areas from which air can be excluded can be extinguished by flooding with argon or helium from a fixed system.

34. Absolutely dry sand, rock dust, or powdered dolomite will contain a small titanium fire and eventually extinguish it.

35. Water is not recommended as an extinguishing agent for titanium fires.

Electrical Equipment

36. All electrical equipment, including motors, in areas containing titanium dusts or fines should be of the type approved by the "National Fire Codes"* for use in hazardous locations, Class II, Group E, F, or G, whichever is applicable. The equipment should be installed in accordance with the requirements of the code, Article 500.

37. Only spark-resistant fan

blades and hand tools should be used in these areas. All electrical equipment, including mixing equipment, should be electrically bonded and grounded.

Personal Protective Equipment

38. Workers who handle titanium tetrachloride should wear rubber gloves for protection against acids. Clothing should fit tightly. Sleeves should be kept rolled down and buttoned at the wrist. Trousers should have no cuffs.

39. For work on lines containing titanium tetrachloride where leakage or rupture may occur, face shields and acid goggles should be worn.

40. Ordinary cartridge-type masks (for acid gases or organic vapors) are effective for work with titanium tetrachloride where concentrations of fumes are low. In areas where the concentration may be high, self-contained oxygen masks are recommended.

41. Workers handling dry titanium powder should wear spark-resistant shoes, flameproofed clothing without pockets or cuffs, and goggles or face masks to provide protection against flash burns.

First Aid

42. Any case of injury from molten titanium or from particles of titanium should receive immediate attention and should be referred to a physician for proper treatment.

43. If titanium tetrachloride is splashed in the eyes, they should be washed with copious amounts of water and should be examined by a physician as soon as possible.

44. Titanium tetrachloride spilled on the skin should be wiped off with a *dry* cloth, and the affected areas should then be washed with copious amounts of water. Medical attention should be obtained promptly.

45. If titanium tetrachloride should be spilled on the clothing, the garments should be removed at once, particularly the shoes and gloves. Contaminated clothing should never be flushed with water because titanium tetrachloride reacts violently with water to form hydrochloric acid.

REFERENCES

Agent H. A. Campbell's Tariff No. 10, Interstate Commerce Commission Regulations for Transportation of Explosives and Other Dangerous Articles by Land and Water in Rail Freight, Express and Baggage Services and by Motor Vehicle (Highway) and Water, Including Specifications for Shipping Containers, Interstate Commerce Commission, Washington 25, D. C.

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Titanium; Production, Processing, Handling, Storage, Standard No. 481, National Fire Protection Association.

ACKNOWLEDGMENT

This data sheet was prepared by the Republic Steel Corporation and the Engineering Committee of the Metals Section of the National Safety Council. It has been extensively reviewed by The Titanium Metals Corporation of America, members of the National Safety Council, and representatives of chapters of the American Society of Safety Engineers. It has been approved for publication by the Publications Committee of the Industrial Conference of the National Safety Council.

^{*&}quot;National Fire Codes," Vol. V, Electrical, National Fire Protection Association, 60 Batterymarch St., Boston 10, Mass.

Wire from Washington

-From page 17

from federal safety standards than airplanes. There is regulation over civil aviation. It is the same principle as making canned goods and drugs come up to the standards of safety. The auto industry ought to put every known practical safety device on cars.

"We believe the Federal Government should take leadership in things like pure food and drugs, like we did in safety in refrigerator door construction, and like we did with our airplanes, like we did with the railroads, like we did with the Flammable Fabrics Act, where we set certain standards of flammability.

"We did not take over that industry; we do not take over this one . . . The Federal Government has accepted responsibility for making safety requirements in all fields of interstate commerce. Whatever the cost, it will not be unreasonable. No one can put a dollar value on human life. . ."

The second bill, H.R. 8238 (Schenck), directs the surgeon general of the Public Health Service to conduct a study—and report to the Congress in two years with recommendations—on the health hazards resulting from motor vehicle exhausts. The committee said that such "research is necessary to establish criteria on which engineers can develop better control methods."

Congress passed, and the President signed, a third bill that came out of the Roberts subcommittee, the four-year extension of the Federal Air Pollution Control Act, H.R. 7476, PL86-365. Earlier, Senator Engel of California warned: "It may be that positive federal restriction ultimately would be required . . ." on air pollution.

Considerable steam was generated by an administration-sponsored National Conference on Air Pollution, which recommended a vigorous development by industry of exhaust system control devices, a study by the auto industry of maintenance aspects of the auto exhaust-air pollution problem, and a continuation of government research.

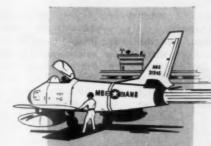
The surgeon general of the Public Health Service predicted that in two years a practical, efficient and economical device will be available to make car exhaust fumes harmless.

There has been extensive debate on the recently adopted financing program for the highway construction bill. The President and members of Congress urged traffic safety as a justification for action.

Washington's interest in traffic safety is reflected in the Secretary of Commerce's report, "The Federal Role in Highway Safety." This document is of major significance-because it stakes out a substantial area of federal responsibility in the national traffic safety field; it calls for "an official working focus in the Federal Government"; and it points an accusing finger—gently but clearly—at public and private traffic safety organizations for their failure to take steps necessary to advance highway safety.

Although no direct action has yet been taken on this report, its reverberations must be reckoned with in traffic safety.





TAMES EARSPLITTING

SHRIEK



"QUIET-EAR" PROTECTOR for optimum noise protection

Of unique new design, "Quiet-Ear" Protector uses neither bulky absorbing materials, nor excessively large sealing shells. Light in weight, highly efficient, sanitary, simple and inexpensive, the B&L "Quiet-Ear" Protector belongs wherever noise becomes a menace or a nuisance.

of jet engines, missiles, and other loud and injurious noises of military or industrial operations

Bausch & Lomb is proud to present the "Quiet-Ear" Protector, developed to meet an urgent need for more effective and comfortable ear protection required by personnel who work near loud noises. Such applications are wide: jet airfields and carrier flight decks, diesel engine generator houses, bio-acoustic testing laboratories, artillery or missile launching sites, steel rolling mills, punch press machinery, rock drilling, riveting and many others. For complete details, or more information on noise protection, write: Bausch & Lomb Optical Co., 90348 Lomb Park, Rochester 2, N. Y.



PROTECTION PLUS in Sight and Sound

Protection + Economy + Worker Acceptance

Circle Item No. II—Reader Service Card

Transportation Briefs, Commercial, marine and aviation transportation also figured in Congressional action. The Senate approved S. 1806, to amend the Transportation of Explosives Act and to bring under Interstate Commerce Commission jurisdiction the transportation of radioactive materials and etiological agents—in the interest of safety.

S. 2118 became law, PL86-244, authorizing the U. S. Coast Guard to prescribe regulations governing

lifesaving, firefighting and other safety devices aboard vessels.

The Congress passed, but the President vetoed, H.R. 8728, which would have delayed for one year, until April 1, 1961, the effective date of the provision of the Federal Boating Act of 1958, requiring federal registration of boats with more than 10 horsepower.

In aviation safety the relationship of safety to airport construction was thoroughly debated in connection with the enactment of the new Federal Airport Construction Act.

Administrative action dealt with age limits for airline pilots—sought for safety reasons, the frequency of pilot proficiency checks, and establishment of a Collision Prevention Advisory Group to probe the field and contribute research.

Additionally, the Public Health Service has made a grant to the Flight Safety Foundation to start a nation-wide study of private-flying safety.

Home Safety. The Senate passed S. 2197, proposed by the administration, to regulate the use of color additives in food, drugs and cosmetics within safe tolerance limits.

Many bills, and some limited House hearings, were devoted to combating the lethal effect of plastic bags on small children, but no legislative action was taken during the past year.

Farm Safety. Regulations governing federal farm placement programs were made more stringent in the interest of safety. The attorney general of the United States ruled that safety considerations were legitimate criteria for determining whether farm laborers should be placed in certain jobs.

And in the Mexican farm labor placement program, new federal regulations required safe transportation arrangements because, allegedly, state laws failed to deal adequately with the matter.

National Accident Prevention Center. Prior to adjournment of Congress, Congressman Roberts introduced H.R. 9243, to create a National Accident Prevention Center in the United States Public Health Service.

Under its terms the Public Health Service would be empowered to conduct and foster research into the causes and prevention of all kinds of accidents, "promote the coordination of research and control programs conducted by public and private agencies, organizations, and individuals," make grants, and establish an information center, among other powers conferred upon it.

Two years ago, I said: "Both the President and the Congress stated the basic issue before the American people: Will the growing demand





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... industrial leader installs the leading fire protection system

The Gamewell system endorsed by Engineer Howard Spaulding was carefully designed to protect all lives and property in Gillette's 11 buildings - headquarters of the internationally known manufacturer of razors, blades and other products.

A Gamewell system can be engineered to safeguard your own business from fire losses - including not only irreplaceable human lives but buildings and equipment that can't be renewed at their original costs. It will warn all personnel, signal your locals fire department and, if required, will include fire

detection units that activate the entire system — instantly — automatically.

Ask your Consulting Engineer about these advantages. Also, a Gamewell Fire Protection Engineer will be glad to give you details about installation requirements, performance and price. Send the coupon below for this service and/or a Gamewell technical manual — without obligation.



Control Panel	FIRST WHEN SECONDS COUNT!		
Alarm Circuits (one or more)	GAMEWELL CO., Dept. 6C 1296 Chestnut Street Newton Upper Falls 64, Mass.		
Non-Code and Automat Fire Detector (one or more loops)	Engineer call Send me a Gamewell Fire Alarm Syste Planning Guide Name. Title.		
Power Source	Address. CityZoneState		

that 'something be done' evoke timely and effective state, local and private action or will their default force the Federal Government to act? 1957 was the year of challenge. Will 1958 be the year of response?"

Last year, I said: "One thing is fairly clear to a Washington observer, that the opening gambit for most proposals to extend or expand federal activity in safety is generally phrased something like this: 'This subject is, of course, a legitimate concern for local and state regulation, and voluntary leadership. But-!' Is 1959 to be another year of 'buts'?"

Did the legislative year 1959 bring an answer to this question? Yes, 1959 saw the beginning of some really significant "buts." The House passed H.R. 1341, presumably to require safety standards only for federally-owned vehicles but actually conceived also as a means of federal action toward safety design features. Why? Mr. Roberts told the American Medical Association why:

"But after three years of pointing out some of the things which need to be done, and with no indication of early action on the part of anyone else, I believe we must pass some sort of legislation in the best interests of the motoring public."

To put it differently, Mr. Roberts said: ". . . the people of the nation are waking up to the fact that we need safer automobiles."

And the long-range significance of the latest Roberts bill, H. R. 9243, to establish a National Accident Prevention Center, is of the utmost importance. If Congress gets the idea that you can substitute dollars for deaths, things are going to move fast.

Warnings have come this past year from the highest levels in the judicial, legislative and executive branches of the Federal Government that time is running out on the public's patience with what it regards as inaction or ineffectiveness in the face of critical public needs.

Chief Justice of the United States

Earl Warren said in a statement made from the bench:

"We hear a great deal these days about the relationship of the Federal Government to the state governments. And in some parts of the country the cry is being heard that the Federal Government is infringing upon what is known as states' rights.

"There may have been times in our history when the Federal Government became too deeply involved in matters that were the proper prerogatives of the states, but in my opinion this has generally happened only when the states themselves have failed to meet the needs of the people.

"When the state governments fail to satisfy the needs of the people, the people appeal to the Federal Government.'

On the first day of the last Congressional session, Senate Majority Leader Lyndon B. Johnson said: "Responsible government is responsive government."

The last warning came from the

IS ROUSE YOUR PRODUCTION HEADACHE?

Constantly exposing any employee to abnormally loud and injurious noise becomes a direct attack upon his working efficiency, causes mental depression and early fatigue. The result, of course, is a marked loss in production.

Straightaway muff type Sound Protectors keep out these harmful noises to prevent impairment of hearing. They are extremely comfortable because they quickly mould to the contours of any head without fitting or adjusting. Ruggedly built, sanitary and easily cleaned, they remain repair-free for years.

Model 372-8A \$12.00 each (1-99)

\$11.00 each (100 or more) Try one for 30 days

Communications Model 372-8BM

For larger quantities prices on request



\$83.25 each







Model 372-8A (left), headband type, attenuates dangerous noises, and permits normal conversation.

Communications Model 372-8BM (right) incorporates a carbon microphone for civilian aircraft communication systems, attenuates an extra 10 db. and includes a push-to-talk button (or toggle switch) in the mike shield.

Hillyard Super HIL-TONE FLOOR DRESSING

SAFEGUARDS against FIRE HAZARDS

Safe on the Floor-Safe in the Mop-Safe in Storage

1 No possibility of spontaneous combustion-

SUPER HIL-TONE is chemically "non-oxidizable" - that is, it can't absorb oxygen when exposed to air, the common cause of heating and spontaneous combustion with widely used, dangerous oily floor dressings.

3 "Classified as to

Floor oils leave a 100% residue that penetrates to create a dangerous fire hazard. Super Hil-Tone is non-oily. - After sweeping only a 20% protective residue is left to condition and protect the surface - keeps finishes from drying out and becoming brittle. A Super Hil-Tone wear resistant film strengthens the finish and enhances it with a deep, lustrous sheen.

2 It's fire-retardant-

In official tests, using the "TAG" Closed-Cup Tester, SUPER HIL-TONE failed to show flash point at temperatures up to 175° F. In fact, SUPER HIL-TONE discourages fire. Ask

the Hillyard Maintaineer to demonstrate this important property.

fire hazard"

By unique AD-SORPTIVE action, holds dust on the floor surface for fast, efficient removal. Reduces the count of dust particles kicked up by passing feet. Sweeping goes fast and easy; frequent scrubbing is not necessary. It's the answer to your problem of cutting labor time in sweeping, without sacrifice of sanitation, appearance, or safety.





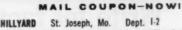
Ask the Hillyard "Maintaineer®" for expert advice on more effective floor maintenance.

He's a trained floor care specialist. Your Staff, Not Your Payroll



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Please send me free literature on Hillyard "Fire-safe"
SUPER HIL-TONE sweeping.
Please have the Hillyard MAINTAINEER demonstrate SUPER
HIL-TONE sweeping on my floors. No charge or obligation.

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Circle Item No. 15-Reader Service Card

secretary of commerce in his highway safety report to the Congress:

"Most of all, officials representing government, highway users, and the automotive, insurance, and associated industries urgently need to reach clear agreement on their respective objectives and obligations.

"They must decide, or face having it decided for them by a public now gradually awakening, how and to what extent they will share in a comprehensive, coordinated highway safety plan."

One expects that such public warnings from the chief justice of the United States, the senate majority leader, and the secretary of commerce will be restrained, refined, and reasonable.

However, unless the safety movement bestirs itself strenuously, soon, and successfully, the best prophet of all could be the Washington cabdriver whose fare asked the meaning of the Shakespearean inscription on the National Archives Building: "What is past is prologue."

The driver's blunt definition was: "Brother, you ain't seen nothin' yet!"

THE SAFETY LIBRARY



Reviews of books, pamphlets and periodical articles of interest to safety men

By LOIS ZEARING, Librarian, NSC

Chemistry of Industrial Toxicology

The Chemistry of Industrial Toxicology—Second Edition. By Hervey B. Elkins. John Wiley and Sons, 440 Fourth Ave., New York. 1959, \$11.50. 452pp.

This book has been written for the chemist and engineer and emphasizes harmful substances themselves, rather than presenting a complete physiological characterization of their effects. The nature of injuries from various industrial poisons is mentioned, primarily in relation to the probable seriousness of their effects.

The first two chapters on fundamentals and evaluation of hazards set the stage for a further discussion of the chemical and industrial phases of industrial toxicology. The chapter on fundamentals discusses such topics as avenues of absorption, a brief but adequate discussion of the respiratory process, and harmful effects. Evaluation of hazards contains general information on precise methods for determining whether or not a hazard exists.

Chapters 3 through 10 classify and discuss industrial poisons. The more important compounds of each toxic element are listed according to their grouping in the atomic table. Also discussed in this section are inorganic compounds, acids, alkalies, and oxidizing agents.

Inorganic carbon compounds such as carbon monoxide, as well

Looking for permanence 7

... and low cost

-To page 56

Non-slip surfaces breaking ? down...wearing out ...







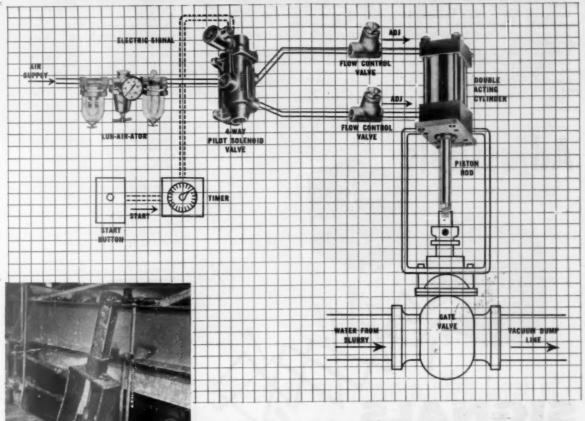


Write for facts on new non-skid M-S-A® Dura-Grip...It stays down

Safety surfacing compounds that break down or wear out lose their safety value and cause expensive maintenance problems. MSA Dura-Grip will wear for years and it keeps maintenance costs low because it stays down. For information, write Mine Safety Appliances Company, Pittsburgh 8, Pa.



PROCESSOR SPLITS PRODUCTION BOTTLENECK WIDE OPEN WITH HOOKUP OF STANDARD SCHRADER AIR PRODUCTS



Here's how one company automates with air. The hookup of Schrader Air Products in the large diagram actuates gate valves used in processing a slurry of raw asbestos fiber and cellulose at The Republic Seitz Filter Corporation, Newark, N. J. This used to be a slow, arduous manual job. Now air does it quickly, effortlessly, under "conditions particularly difficult for most kinds of automatic equipment . . . without a minute's downtime and without any maintenance whatever," says the company's Technical Director. Schrader-trained air specialists helped plan this practical set-up, as they have helped plan countless others.

Boost productivity of even complex operations quickly and economically, like this company . . . with air! Plan it yourself, or let our experts help. A system of Schrader Air Products can simplify almost any bottleneck job ... whether it's processing, assembling, testing or packaging . . . pushing, pulling, holding, positioning or moving work repetitively.

With Schrader Products, you can run practically

any production line faster, safer, more economicallyand with tireless accuracy! Maintenance is surprisingly low.

These are benefits every shop needs. Take advantage of them all when you automate with Schrader . . . the finest, the most complete line of Air Cylinders, Valves and Accessories ... plus countless ideas for cutting your operating costs.

Select air controls from the full Schrader line. Your Schrader distributor can help you pinpoint what you need. For more data, write:



Division of Scevill Manufacturing Company, Incorporated 452 Vanderbilt Avenue, Brooklyn 38, N. Y.

QUALITY AIR CONTROL PRODUCTS

Circle Hem No. 17-Reader Service Card

Safety's Big Show

-From page 25

Browne, Stewart R., Manufacturing Co .-Electrical safety equipment, explosionproof inspection lights, flashlights, and grounding

Buhrke, R. H., Co.-Safety equipment for

construction and maintenance.

Bullard, E. D., Co.—General industrial safety equipment.

Campbell Chain Co.-Sling chains.

Chance, A. B., Co.—Hot line maintenance

Chemical Corp.—Protective creams and hand cleaners.

Chicago Eye Shield Co.-Head and eye protection.

Chrysler Corp.-Automobile safety fea-

Clark, J. R., Co.—Industrial ladders. Clark, David, Co.—Ear protectors, space

Columbus McKinnon Chain Corp.-Alloy steel sling chains

Conductive Hospital Accessories Corp., Federal Flooring Corp.—Devices for meas uring electrical resistance of flooring, personnel, and equipment.

Cunningham, M. E., Co.—Safety marking

Davis Emergency Equipment Co.-Respiratory protection, combustible gas indicators, general safety and first-aid equipment.

Defense Apparel—Clothing, gloves, shoe

covers, plastic suits.

Detex Watchclock Corp.-Watchmens'

AMF DeWalt Div.-Woodworking equipment with safety features.

Dietz. R. E., Co.-Automotive lighting and safety equipment.

Dockson Corp.—Welding helmets, goggles,

Dow Chemical Co.—Solvents with color-coded drums for identification.

Dow Corning Corp.—Eyeglass cleaning stations, silicones for leather treatment.

DuPont de Nemours, E. I., & Co.-Colloidal silica to render packages slip-resistant, leather treatment, neoprene soles and heels, synthetic fibers for fire hose and cordage, flame retardants for paper and fabrics.

Eagle Manufacturing Co.-Safety cans and oilers.

Edmont Manufacturing Co.-Work gloves. Elkhart Brass Manufacturing Co.-Firefighting equipment.

Elliott Service Co.-Safety and industrial relations training aids.

Emerson, J. H., Co.-Resuscitation equipment, safety matting.

Federal Sign and Signal Corp.—Sirens,

horns, warning lights, belts.
Fendall Co.—Head and eye protection. Fibre-Metal Products Co.—Head and face protection, welding equipment.

Fine Organics, Inc.—Safety solvents. Ford Motor Co.—Automobile safety fea-

Frommelt Industries-Portable welding shields and protective heat cloth.

Fyrepel Products, Inc.—Protective clothing and equipment for fire fighting.

Fyr-Fyter Co.-Portable and fixed firefighting equipment.

General Fire Extinguisher Corp.-Firefighting equipment.

Glendale Optical Co.-Eye protection. Globe Co.-Grating and stair treads. Globe Industries, Inc.-Resuscitation and

breathing equipment. Grinnell Co.—Fire protection systems.
Gro-Cord Rubber Co.—Slip-resistant soles and heels.

Halperin, A. E., Co.-First-aid kits. Watch Co. - Watches for Hamilton awards.

Haws Drinking Faucet Co.-Emergency showers and eye fountains.

Hild Floor Machine Co.-Maintenance equipment, explosionproof vacuum cleaners and floor machines.

Hygiene Research, Inc.-Protective ointments, mist-proofing cloth for goggles and windshields.

Hy-Test Safety Shoe Div., International Shoe Co.—Safety footwear, including conductive and special types for radiation ex-

Industrial Acoustics Co.-Audiometric examination rooms, hearing conservation programs.

Industrial Gloves Co.—Work gloves for general industrial use and special exposures. Institute of Industrial Launderers-Industrial launderers and cleaners, flameproofing and renovating work garments.

Insto-Gas Corp.-Torches and furnaces. Interstate Rubber Products Corp.—Trafficones.

Iron Age Safety Shoe Div., H. Childs & Co.-Leather and rubber footwear for all occupations.

Jackson Products Air Reduction Sales Co., Div. of Air Reduction Co.—Electrode holders, cable connectors, face shields, and goggles.

Jomac, Inc.-Work gloves and protective clothing.

Jones & Co.-Full-vision visor goggles. Jones & Laughlin Steel Corp.-Wire rope and slings.

Junkin Safety Appliance Co.-Power

Adjustable

The new VIBRATONE Horn has ample sound output for most any application. In many cases certain areas require less than maximum

VIBRATONES, by a simple adjustment can be tuned down to any desired sound level above a whisper.

VIBRATONES survive continuous duty because they are selfadjusting electrically and mechanically. Sound volume is almost instantly adjustable to your desires.

This is only one of dozens of exclusive and outstanding features of this new and radically different signal.

The VIBRATONE can solve your signalling problems. Write for Bulletin #27 today.

Corporation 13625 S. Wostera Ave., Nive Island, III

Circle Item No. 18-Reader Service Card



"Neoprene soles have helped us maintain a high level of quality in Weinbrenner service, work and safety shoes"



Mr. John Dickinson Vice President and Director of Sales A. H. Weinbrenner Co. Milwaukee. Wisconsin

"At the A. H. Weinbrenner Company," comments Mr. Dickinson, "we pride ourselves in making 'Thorogood Job-Fitted Work Shoes' a tough, durable line of comfortable Special Service shoes for policemen, mailmen, bus drivers and service station attendants. We specify neoprene soles for this important segment

of our business, the uniformed worker."

Leading manufacturers specify neoprene became

Leading manufacturers specify neoprene because it's one soling material that stands up under all rugged working conditions. Neoprene soles are crack-resistant and keep their flexibility even on the coldest days. Furthermore, they have excellent oil, grease and chemical resistance. Over the years, new types of neoprene and improvements in established types have kept it the longest wearing, most resilient soling material available.

The selling power of the neoprene name is put to work right on the shoe sole. To add a profitable sales asset to *your* line of work and safety shoes, specify neoprene soles and heels. E. I. du Pont de Nemours & Co. (Inc.), Elastomer Chemicals Department NS-12, Wilmington 98, Delaware.





SYNTHETIC

Better Things for Better Living . . . through Chemistry

Circle Item No. 19—Reader Service Card

press guards, grinding wheel shields, stretch-

Justrite Manufacturing Co.-Safety cans, oily waste cans, electric lanterns, and flashlights.

Karel First-Aid Supply Co.-Medical supplies and hospital equipment.

Kelley Paint Co.-Slip-resistant enamel. Keystone View Co.—Sight acreening ment.

Kidde, Walter, & Co.-Fire-detecting and extinguishing equipment.

Kimball Safety Products Co.—Personal

protective equipment.

Klein, Mathias, & Sons-Linemens' tools and equipment.

Knapp Bros. Shoe Manufacturing Corp. -Safety footwear. Kunz, J., Glove Co.—Gloves for linemen,

bridgemen, and welders.

Lawter Chemicals, Inc.-Fluorescent safety colors.

Leeder Manufacturing Co.-Dry chem'cal fire extinguishers.

Legge, Walter G., Co.-Floor maintenance materials, conductive coatings, static eliminators.

Lehigh Safety Shoe Co.-Leather and rubber safety footwear.

Lightfoot Co .-- Skin cleansers and condi-

Logan Emergency Showers, Inc.—Emerand decontamination showers and

Lowery Bros., Inc. (National Swage Tool and Die Corp.)-Wire-rope splicing service.

McAn, Thom, Safety Shoe Div.-Safety footwear.

McDermott, Julian A., Corp.-Warning and protective lighting for municipal, industrial, and aviation use.

McKay Co.-Industrial chain, tire chain, arc-welding electrodes, stainless, and alloy

McQuarrie, R. J., Enterprises-Automobile seat belts.

Maico Electronics, Inc.-Auditory equipment for hearing conservation.

Marsh & McLennan, Inc.-Insurance and engineering service. Martindale Electric Co.-Dust masks, eye

protectors, face shields, electric test instru-

Medical Supply Co.-First-aid and snakebite kits, stretchers, salt tablets, poison ivy and burn treatments.

Metropolitan Life Insurance Co .__ _Materials for community health and safety pro-

Meyer Machine Co.-Safety clamps for

workers in high places.
Micro Switch, Div. of Minneapolis-Honey-well Regulator Co.—Interlock switches and electric controls.

Milburn Co.-Protective creams, skin

cleaners, protective clothing.

Miller Equipment Co.—Safety belts, webbing slings, and canvas products for lineand industrial workers.

Mine Safety Appliances Co.—Safety equipment for all industries.

National Disinfectant Co.-Safety solvents, maintenance materials.

National Medical Supply Co.-Industrial first-aid supplies and equipment. Newco Manufacturing Co.-Wire rope fit-

Notifier Corp.—Automatic fire detection,

sprinkler supervision, security and plant protection systems. Occupational Hazards-Safety publica-

tions. Onox, Inc.-Materials for prevention of

athlete's foot. Osborn Manufacturing Corp.—Pliers and

tongs for feeding punch presses. Oxy-Gear, Inc.-Portable oxygen inhalator kits.

Pac-Kit Co.-First-aid and snake-bite kits. Packwood, G. H., Manufacturing Co .-Skin cleansers, dispensers, and maintenance cleaning compounds.

Patent Scaffolding Co.-Wood and metal ladders and scaffolding, sidewalk protection canopies, steel grandstands.

Perfect Circle Co.-Piston rings, sleeve castings, speedostat (driving aid.)

Peterson Engineering Co.-Line construction equipment. Pioneer Rubber Co.-Work gloves.

Portable Light Co.-Portable searchlights and sirens.

Porto-Clinic Instruments, Inc.-Drivertesting and training equipment.

Positive Safety Manufacturing Co.-Power press guards. Prairie State Products Co.—Safety signs

and bulletins. Progress Industries, Inc.-Wide-vision gog-

Protectoseal Co.-Equipment for handling

Pulmosan Safety Equipment Corp.-Personal protective equipment.

ing ladders

Racine Glove Co.-Work and special protective gloves.

Radiator Specialty Co.-Rubber traffic guides.

guishers and automatic systems Riegel Textile Corp., Industrial Glove

flammable solvents.

Putnam Rolling Ladder Co.—Fiberglass stepladders and extension ladders, oak roll-

Randolph Laboratories, Inc.-Fire extin-

Div.-Work gloves.

Circle Item No. 20-Reader Service Card

Cut Insurance costs with ...

JUNKIN Safety Guards

Invest in safety-accidents cost money! Junkin Safety Guards for primary and secondary punch press operations afford maximum protection, increase press production and lower insurance rates. Swinging Die Closure is constructed to be adaptable to a variety of primary operations.



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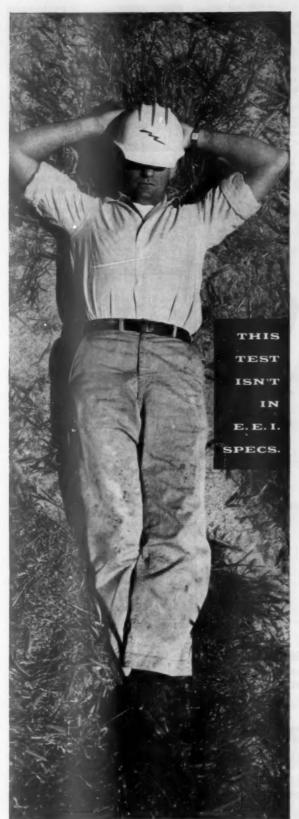
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HY CAPS BULLARD

Providing electrical crews with headgear they'll want to wear and really appreciate takes more than just passing a set of written specifications. It takes an intangible you might call "design" or "wearability". No matter what you call it...this is what Bullard KV Caps have got! They fit just as lightly and comfortably as your favorite old fishing hat. This KV Cap with its narrow brim won't be picked up by the wind or be in the way working in tight spots. So far as tests are concerned, it not only passes...but surpasses all Edison Electrical Institute specifications. But the real test of the Bullard KV Cap is in the wearing. Put it on yourself, you'll know that it passes.

BULLARD

Write for independent laboratory report.



Bullard KV Hats and KV Shorty Caps are available in Yellow, White, Grey and Orange.



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Circle Item No. 22—Reader Service Card

Rockwood Sprinkler Co.-Automatic fire protection systems

Rose Manufacturing Co.—Safety belts, ladder safety devices, shock-absorbing equip-

Safeguard Manufacturing Co. - Press guards.

Safety Box Toe Co.-Steel toe caps for safety shoes

Safety Clothing and Equipment Co.-Protective clothing.
Safety First Products Corp.—Fire extin-

guishers.

Safety First Shoe Co.-Safety footwear. Safety Tower Ladder Co.—Safety equip-ment for fixed ladders and scaffolds.

Saf-T-Boom Sales and Service Corp.— Crane boom guards to prevent electrical

Salisbury, W. H., & Co.-Linemens' protective equipment.

Sarole, Inc.-Carriers for the injured. Schrader's, A., Son-Pneumatic press controls and accessories.

Scott Aviation Corp.-Breathing apparatus.

Serjeant Metal Products, Inc.-Press guards, controls, and accessories

Sellstrom Manufacturing Co.-Head and eye protection.

Standard Safety Equipment Co.-Industrial protective equipment. Stanton Scientific Equipment Co.-Resus-

citators. Stephen-William Co.-Employee com-

munication and visual aids. Stephenson Corp.—Resuscitators.

Stonehouse Signs, Inc.-Warning, direc-



Dr. William P. Yant, director of research and development, Mine Safety Appliances Company, discusses problems of the handicapped with Paul Scher, state employment specialist who manned the exhibit for the President's Committee on Employment of the Physically Handicapped. Mr. Scher himself is legally blind. Dr. Yant is a leader in promoting the idea that it is good business to hire the handicapped.

KEEP SAFETY IN SIGHT



Protective Eye Wear Stay Clean Longer with K-LENS-M

The Modern Liquid Method Cleans and Anti-Fogs Glass or Plastic

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THE WILKINS CO., INC.

Wise to Choose — Safe to Use Copyright, The Wilking Co.

Circle Item No. 23-Reader Service Card

tion, and instruction signs.

Stop-Fire, Inc.-Fire extinguishers.

Surety Rubber Co.-Personal protective equipment.

Surty Manufacturing Co.-Machine guards, magnifiers, dust collectors. Switzer Bros., Inc.-Fluorescent paint.

Swivelier Co.—Commercial and industrial lighting fixtures. Taylor, S. G., Chain Co.-Alloy steel

chain and attachments, chain repairing. Tect, Inc.-Safety solvents and detergents.

Titmus Optical Co.-Eye protection, vision testers.

U-C-Lite Manufacturing Co.-Explosionproof hand lamps.
Union Wire Rope Corp.—Wire rope

United States Rubber Co.-Protective clothing and footwear.

United States Safety Service Co.-Eye protection.

Wagner Sign Service, Inc.—Changeable copy displays. Watchemoket Optical Co.-Goggles, res-

pirators, safety signs. Welsh Manufacturing Co.-Goggles, face

shields, helmets, respirators. Westline Products Div., Western Lithograph Co.-Self-sticking identification markers and signs.

Wheeler Protective Apparel, Inc.-Protective clothing for heat and abrasion hazards. Williams Jewelry & Manufacturing Co .-Plaques, emblems, awards, trophies, incen-

Willson Products Div., Ray-O-Vac Co.-

Eye and respiratory protection. Wilson Rubber Co., Div. of Becton, Dickinson & Co.-Rubber and synthetic gloves. Zenith Radio Corp.-Diagnostic audiometers that can also be used for individual

and group screening.

EDUCATIONAL EXHIBITS

Automobile Seat Belt Institute-Belts and parts that meet SAE standards.

Inter-American Safety Council-Safety services for Latin America. Junior Achievement of Chicago.

National Society for the Prevention of Blindness—The Wise Owl Club.

President's Committee on Employment of the Physically Handicapped.

Weirton Steel Co.-How an industry cooperated with the community in an annual safety week program.

ONTOP

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IN SAFETY

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with the
Right Ladder
for every Job

GOLD MEDAL SAFETY PLATFORM LADDERS

Sizes 3' to 18', height to platform



Broad platform permits working in any direction with both hands free.

Rung back can be used by helper for climbing.

Tool rack safely and conveniently holds tools, preventing them from falling.

Made of the finest selected spruce; all hardware is plated to re-

Equipped with Gold Medal Safety Spreader. Each step truss-rodded and knee-braced. Conform in all details to the A. S. A. and State Ladder Codes.

Listed by Underwriters' Laboratories, Inc.

GOLD MEDAL LADDERS

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To be on top of the maintenance job around any building, from one floor to an acre or more, means ability to meet a great variety of situations. A good half of them will take you off the floor, too. There, a new safety angle enters the picture. The big, comprehensive line of Gold Medal Ladders enters, too, because it includes features of design which mean maximum safety in use, convenience in storage and handling—but, above all, the right working position for the man on the job.

GOLD MEDAL SAFETY EXTENSION LADDERS

Finest of this type. Only the finest straight-grained stock is used. Safety features include pressed steel rung braces, automatic, improved safety locks, steel guide irons, riveted metal to metal. Sizes 16' to 60'. Listed by Underwiters' Laboratories, Inc.

NEW PS CO. SAFETY LADDERS

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Made in 20" and 30" widths, from 1 to 5 steps without handrails (shown); 2 to 12 steps with handrails. Easy-to-roll, self-locking casters. Flared bottom design gives maximum stability. Steel angle reinforcesall steps. Write for Bulletin SL-1.



STEP LADDERS OF ALL TYPES

In addition to the Safety Platform Ladder (above) the Gold Medal Line includes the Underwriter, the Electric Step Ladder, etc., each distinguished by features that suit them to certain types of work.



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These are the men who, under the direction of Vice-President for Industry Earle S. Hannaford, are leading industrial section activities

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Vice-Chairman: Kenneth L. Stebbins, Director of Safety, Lycoming Div., AVCO Mfg. Corp., Stratford, Conn.

Air Transport:

General Chairman: Hugh Butler, Supervisor Maintenance Manuals & Training, Eastern Airlines, Colonial Div., LaGuardia

Airport, Flushing, N.Y.
Vice-Chairman: N. L. Christofel, Staff Superintendent Safety, United Air Lines Inc., Stapleton Airfield, Denver, Colo.

Automotive and Machine Shop:

General Chairman: G. C. Squier, Safety Engineer, Chrysler Corp., Detroit, Mich. Vice-Chairman: Geo. Humphreys, Safety Director, Cadillac Motor Car Div., General Motors Corp., Detroit, Mich.

Cement, Quarry and Mineral **Aggregates:**

General Chairman: Wm. A. Kipp, Direcof Safety, Universal Atlas Cement, Division of U.S. Steel Corp., New York,

Vice-Chairman: F. Storch, Director of Safety & Personnel, The Whitehall Cement Mfg. Co., Cementon, Pa.

Chemical:

General Chairman: A. B. Ritter, Safety Engineer, Hercules Powder Co., Research Center, Wilmington, Del.

Vice-Chairman: E. G. Meiter, Director, Industrial Hygiene Div., Employers Mutuals of Wausau, Milwaukee, Wis.

Coal Mining:

General Chairman: J. Smith, Eastern Gas and Fuel Associates, Mount Hope, W. Va. Vice-Chairman: James D. Reilly, Hanna Coal Co., Division of Consolidation Coal Co., Cadiz, Ohio.

Commercial Vehicle:

General Chairman: L. F. Purves, Superintendent of Transportation and Safety,

Toronto Star Ltd., Toronto, Canada. Vice-Chairman: John A. DePew, Direc-tor of Safety and Personnel, Dohrn Trans-fer Co., Rock Island, Ill.

Construction:

General Chairman: Robert L. Moore, Suerintendent of Engineers, Lumbermen's

Mutual Casualty Co., Chicago.

Vice-Chairman: R. A. Wendell, Chief, Safety Branch, South Atlantic Div., Corps of Engineers, U.S. Army, Atlanta, Ga.

Driver Education:

General Chairman: John Haack, Coordinator of Audio-Visual and Safety Education, Davenport Public Schools, Davenport,

Vice-Chairman: Charles Lemmel, Supervisor of Driver Education, State Department of Public Instruction, Dover, Del.

Electrical Equipment:

General Chairman: W. F. McChesney, Director, International Business

Machines Corp., Owego, N.Y.

Vice Chairman: E. J. Turton, Safety Supervisor, Westinghouse Electric Corp., Buffalo, N.Y.

Elementary School:

General Chairman: Miss Ruth Jewell, State Music Consultant, State Department of Public Instruction, Raleigh, N.C.

Vice-Chairman: Leslie R. Silvernale, Assistant Director, Traffic Institute, Michigan State University, East Lansing, Mich.

General Chairman: Elmer C. Perrine,

Technical Representative, Nitrogen Div., Allied Chemical Corp., New York, N.Y. Vice-Chairman: Ansell I. Raney, Safety Director, Phillips Chemical Co., Bartles-

Food and Beverage:

ville, Okla.

General Chairman: G. R. Meyers, Director of Safety & Security, Pabst Brewing Co.,

Milwaukee, Wis. Vice-Chairman: N. L. Heuer, Safety Director, Anheuser-Busch Inc., St. Louis, Mo.

Glass and Ceramics:

General Chairman: J. V. Skendall, Harbison-Walker Refractories Co., Pittsburgh,

Vice-Chairman: E. L. Wray, Ball Brothers Co. Inc., Muncie, Ind.

Higher Education:

General Chairman: Arthur F. Brandstatter, Director, Department of Police Administration and Public Safety, Michigan State University, East Lansing, Mich.

Vice-Chairman: Bernard I. Loft, Associate Professor of Health and Safety, School of Health, Physical Education and Recreation, Indiana University, Bloomington,

Marine:

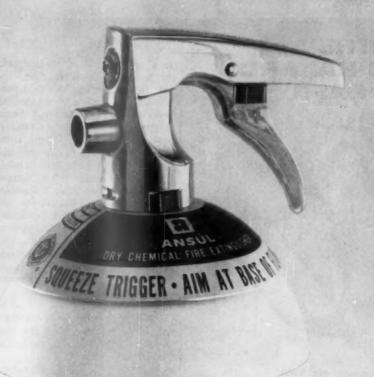
General Chairman: R. E. O'Brien, Vice-President, Operations, Moore-McCormack Lines, Inc., New York, N.Y. Vice-Chairman: R. W. Berry, Assistant

Vice-President, United Fruit Co., North River, New York, N.Y.

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General Chairman: J. E. Thurman, Safety Director, Oscar Mayer & Co., Madison,

Vice-Chairman: D. S. MacKenzie, Direc--To page 101



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-From page 46

as a few miscellaneous inorganic compounds such as nitrogen, appear in this section. The final portion of this section is devoted to organic compounds—hydrocarbons, oxygen, halogen, nitrogen, sulfur, phosphorous, and silicon compounds. Industrial hygienists will find these eight chapters helpful.

There are chapters on natural and industrial products, radioactive isotopes, preventive measures, industrial operations and processes, maximum acceptable concentrations, and air sampling devices. The final chapter on analytical methods and procedures covers 126 pages and should prove especially useful to industrial hygiene chemists.

This second edition of *The Chemistry of Industrial Toxicology* will be a valuable reference and will fill a definite need in the industrial hygiene field.

E. L. ALPAUGH

BOOKS AND PAMPHLETS

Aeronautics

Aircraft Accidents Involving Maintenance, January 1958-December 1958. 1959. Prepared by U. S. Naval Aviation Safety Center, Maintenance and Material Department, Norfolk 11, Va.

Goggles

An Evaluation of Safety Goggles and Safety Shields. Charles E. Green and James F. Hester, 1958. 19pp. Rohm & Hass Company, Redstone Arsenal Research Division, Huntsville, Ala. (S-18).

Health Hazards

Proceedings of Lead Hygiene Conference, Nov. 6-7, 1958. 82pp. Lead Industries Association, 60 East 42nd St., New York 17.

Lumber Industry

Work Injuries and Injury Rates in Sawmills and Planing Mills. 1959. 33pp. U. S. Department of Labor, Bureau of Labor Statistics, Washington 25, D. C. (BLS Report No. 146).

Mines

Application of Electrical-Resistivity Surveys to Exploration for

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Circle Item No. 27—Reader Service Card

Zinc-Lead Deposits, Racine-Spurgeon Area, Newton County, Mo. 1959. 5pp. Distribution Section, U. S. Bureau of Mines, 4800 Forbes St., Pittsburgh 13, Pa. (Report of Investigations 5503).

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Proceedings: Lake Superior Mines

Safety Council, 35th Annual Conference. May 21-22, 1959. 125pp. U. S. Bureau of Mines, 18 Federal Building, Duluth 2, Minn.

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Petroleum Industry

Service Station Safety. Third edition. August 1959. American Petro-

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and movements of the ear canal. Tends to anchor itself in the ear. Has a long life and

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1985 Beverly Blvd., L.A. 57, Calif.

leum Institute, 111 West 50th St., New York 20. (Accident-Prevention Manual No. 5). \$1.

Power Trucks

Instructors' Manual. 18pp. Automatic Transportation Company, 149 West 87th St., Chicago. (A guide to be used for industrial truck operators' training program.)

Powered Industrial Trucks, American Standard Safety Code for— B56.1-1959. 1959. 47pp. The American Society of Mechanical Engineers, 29 West 39th St., New York 18, \$1.50.

Radiation

A Summary of Industrial Accidents in USAEC Facilities. U. S. Atomic Energy Commission. August 1959. 37pp. Office of Technical Services, Department of Commerce, Washington 25, D. C. (TID-5360 (Supp. 2)). 50c. (Describes in narrative form all accidents involving radiation which occurred in atomic energy plants from June 1945-December 1955.)

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Absenteeism

"Patterns of Sickness. Absence in a Railway Population." Cecil Gordon, A. R. Emerson and Derek S. Pugh. *British Journal of Industrial Medicine*. July 1959. pp. 230-243.

Aeronautics

"Heliport Success Based on Convenience." Aviation Week. Oct. 5, 1959. pp. 45-46. (Gives safety considerations for heliports and helistops with a safety checklist for design of rooftop helicopter landing facilities.)

Chemical Industry

"Design for the Future—A Small High-Pressure-Preparations Laboratory." L. E. Craig and J. E. Dew. Industrial and Engineering Chemistry. October 1959. pp. 1249-1252.

"The Essential Element—Individual Responsibility." E. E. Fogle. Industrial and Engineering Chemistry. October 1959. pp. 89A, 92A, 94A.

"Experimental Toxicology—Discovering the Unexpected." H. F.

-To page 62



Free sample when requested on company stationery.

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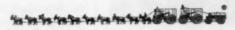
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PERSONALS

News of people in safety and related activities

C. B. FUNDERBURK has been chosen president of the National Association of Mutual Insurance Companies during its 63rd annual convention in Dallas, Tex.

Other officers elected include: GARY H. KAMPER, president-elect, a newly created post by a change in by-laws adopted at this convention; W. T. JAMES, JR., vice-president; and I. G. SALTMARSH, reelected treasurer.

Mr. FunderBurk is president of the Cotton States Mutual Insurance Company and Cotton States Life and Health Insurance Company. Mr. Kamper is president and treasurer of the Badger Mutual, Milwaukee. Mr. James is secretary of the Northern Neck Mutual Fire Insurance Association of Virginia, Irvington. Mr. Saltmarsh is president of Indiana Lumbermans, Indianapolis.

Since 1933 Mr. FunderBurk has lived in Atlanta, Ga., and has served as treasurer of the Cotton Producers Association. In 1955 Secretary of Agriculture Ezra T. Benson appointed him acting manager of the Federal Crop Insurance Corporation, a division of the U.S. Department of Agriculture. Later Mr. FunderBurk became and still is a member of the corporation's board of directors.

He also is a member of the U.S.D.A. Transportation Advisory Committee, is president of the Georgia Council of Farmers Cooperatives, and holds membership on the board of directors of the Georgia Warehouse and Compress Association.

American-Marietta Company has announced the appointment of THEODORE C. RAIA as district safety engineer for the west coast territory, including western Nebraska, Colorado, west Texas, New Mexico, Arizona, California, Nevada, Oregon, and Washington.

A member of the American So-



Theodore C. Raia

ciety of Safety Engineers, San Francisco Chapter, Raia attended Benjamin Franklin High School in Los Angeles, Los Angeles City College, and was graduated from San Francisco State College.

Prior to joining the American-Marietta Company, he was associated with the California State Compensation Insurance Fund, where he served as a field safety engineer in the San Francisco area. He will be headquartered at Berkeley, Calif., where he will coordinate accident prevention programs for 30 American-Marietta plants in the western area.

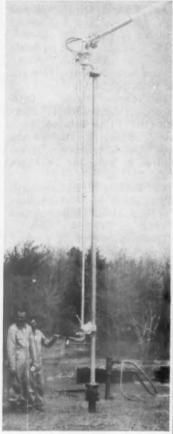
DR. NATHAN H. WOODRUFF has been appointed director of the recently established Office of Health and Safety of the Atomic Energy Commission. DR. FORREST WESTERN, designated acting director of the Office when it was established September 15, was named deputy director.

Dr. Woodruff is now responsible in cooperation with other Commission officers and divisions for de
—To page 87

National Safety News, December, 1959

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...All Rockwood Turrets Discharge FogFOAM
Solid FOAM Stream — WaterFOG — Solid Water Stream



Extended Manual Control
Type — Turret nozzles extend 10 to 20 feet above
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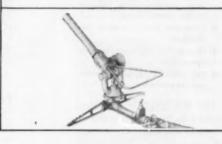
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-From page 58

Smyth, Jr., and John H. Nair, III. Industrial and Engineering Chemistry. October 1959. pp. 75A-77A.

Chemicals

"New Nonflammable Formulations for Sterilizing Sensitive Materials." Edward O. Haenni and others. *Industrial and Engineering Chemistry*. May 1959. pp. 685-688.

"The Operators Report on Safety in Air and Ammonia." Plants, Chemical Engineering Progress.

June 1959. pp. 54-64.

"Toxicological Studies of O,O-Dimethyl-2,2-Dichlorovinyl Phosphate (DDVP) in Tobacco Warehouses." William F. Durham and others. A.M.A. Archives of Industrial Health. September 1959. pp. 30/202-38/210.

"The Toxicity of Trichloroethylene." Jonathan W. Williams Journal of Occupational Medicine. Octo-

ber 1959. pp. 549-554.

"Treatment of Phenolic Wastes." G. Gutzeit and others. *Industrial Wastes*. July 1959. pp. 57-60.

Clothing

"What Supervisors Should Know About Work Uniforms." John J. Roche. *Supervision*. September 1959. pp. 18-20.

Construction

"The Dollars and Sense of Accident Prevention." Robert W. Long. The Constructor. September 1959. pp. 57-58, 62-63. (Article taken from a paper presented before a general safety meeting of the Southern California Chapter, AGC, in Los Angeles, May 1959.)

Fire Protection

"Protect Electronic Computers from Costly Damage and Delays by Fire." Factory Mutual Record. September 1959. p. 2.

Handling Material

"Self-Dumping Hoppers Improve Scrap Handling." A. B. Zurick. Electric Light and Power. Oct. 1, 1959. pp. 56-57.

Health

"The Coffee Break." Jean Spencer Felton. *Industrial Medicine and Surgery*. October 1959, pp. 433-446.

"A Hand Cleanser Derived from Soybean." Conrad Stritzler. Industrial Medicine and Surgery. September 1959. pp. 420-421.

"Iowa Industrial Health Survey, 1957-1958." The Committee on Industrial Health of the Iowa State Medical Society. *Industrial Medicine and Surgery*. October 1959. pp. 455-464.

"Low Back Pain." George S. Hackett, *Industrial Medicine and Surgery*. September 1959. pp. 416-419.

"Safety Aspects of Industrial Hygiene: How Far Do the Fields of Safety and Hygiene Overlap." J. S. Sharrah and P. J. Sherwin. Industrial and Engineering Chemistry. July 1959. pp. 78A-80A, 82A.

Health Hazards

"Environmental Exposure to Uranium Compounds." Morton Lippmann. A.M.A. Archives of Industrial Health. pp. 39/211-54/226.

"Occupational Lung Cancer: A Review." Richard Doll. British Journal of Industrial Medicine. July 1959. pp. 181-190.

"Some Hazards in the Manufacture and Use of Plastics." D. Kenwin Harris. British Journal of Industrial Medicine. July 1959. pp. 221-229.

Hospitals

"How to Get Ready for Radiation Disaster." Martin Saren. *The Modern Hospital*. September 1959. pp. 93-94, 97.

"Personnel Training Advances Hospital Fire Safety." Frank Hanifin. Fire Engineering. September 1959. pp. 858-860.

"Radiological Safety in Medical Facilities." Edwin G. Williams. *The Modern Hospital*. September 1959. pp. 98, 100, 102, 104, 106, 108, 112.

"Safety in the Housekeeping Department." Emma Morgan. Hospital Management. October 1959. pp. 70-71

Maintenance

"20-Point Plant Safety Program to Cut Maintenance Accidents." Wm. G. Meier. Factory. October 1959. pp. 82-86.

Marine Industry

"Accidents in a Naval Dockyard."









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C. P. Collins. British Journal of Industrial Medicine. July 1959. pp. 208-215.

"Organizing Ship with Color Increases Safety, Aids Morale." Marine Engineering/Log. August 1959. p. 128. (Color scheme used in Keystone tanker.)

Mines

"Dermatitis in the South Wales Mining Industry: A Report of a Survey of Two Collieries." Bryan F. Matthews. British Journal of Industrial Medicine. July 1959. pp. 200-207.

Technical Papers Presented at the 28th Annual Meeting of the Mines Accident Prevention Association of Ontario." Canadian Mining Journal. September 1959. pp. 79-122.

Organization

"No Carbon Copies in Industrial Safety." American Machinist. Sept. 21, 1959. p. 133.

OF ALL FIRE DAMAGE OCCURS after THE DOORS ARE LOCKED

A recent survey indicates that most serious blazes break out when the plant is closed. Experience proves that an alert, well-trained watchman is your best bet to save your company from a fiery end. He is far more effective at preventing, detecting, and extinguishing industrial blazes than any singlepurpose mechanical device ever invented.

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Petroleum Industry

"Two Recent Additions to the Offshore Scene Feature Safety and Efficiency." Marine Engineering/ Log. August 1959. pp. 86-88.

Power Presses

"Press Feeders for Speed and Safety." Ray Fiorina. American Machinist. Oct. 5, 1959. p. 90.

Refrigeration

"Preventive Maintenance." Lionel G. King. Refrigeration Service and Contracting. October 1959. pp. 21-22, 36.

Resuscitation

"Mouth-to-Mouth Resuscitation." Coal Age. September 1959. pp. 116-117. (Foremen's Forum).

ADDRESSES OF MAGAZINES MENTIONED

Readers are asked to send their requests for copies of magazine articles to the publishers. The NSC Library is unable to fill such orders.

A.M.A. Archives of Industrial Health, merican Medical Association, 535 N. American

Dearborn St., Chicago 10.
American Machinist, 330 W. 42nd St.,
New York 36.

Aviation Week, 330 W. 42nd St., New York 36.

British Journal of Industrial Medicine, ritish Medical Association, Tavestock Tavestock British Square W.C.1., London, England.

Canadian Mining Journal, National Business Publications, Gardenvale,

Chemical Engineering Progress, American Institute of Chemical Engineers, 25 W. 45th St., New York 36.

Coal Age, 330 W. 42nd St., New York 36. The Constructor, Associated General Contractors of America, Inc., A. G. C. Building, 1957 E St., N. W., Washington

Electric Light and Power, 6 N. Michi-

gan Ave., Chicago 2.
Factory, 330 W. 42nd St., New York 36.
Factory Mutual Record, 1151 Boston-Providence Turnpike, Norwood, Mass. Case-Shepperd-Mann Fire Engineering,

Dept., 305 E. 45th St., New York 17. Hospital Management, Washington Bureau, 1319 F St., N. W., Washington 4, D. C.

Industrial Medicine and Surgery, 400 S. W. 69th St., Miami, Fla.

Industrial and Engineering Chemistry, American Chemical Society, 1155 Six-

teenth St., N. W., Washington 6, D. C. Industrial Waste, 155 44th St., New York. Marine Engineering/Log, 30 Church St.,

The Modern Hospital, 919 N. Michigan Ave., Chicago 11. Modern Lithography, P. O. Box 31,

Caldwell, N. J.

Refrigeration Service and Contracting, Nickerson & Collins Co., 433-435 N. Waller Ave., Chicago 44.

Sentinel, Factory Insurance Association, 85 Woodland St., Hartford 2, Conn. Supervision, 404 N. Wesley Ave., Mount



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AIR-FLOW lens ventilates,

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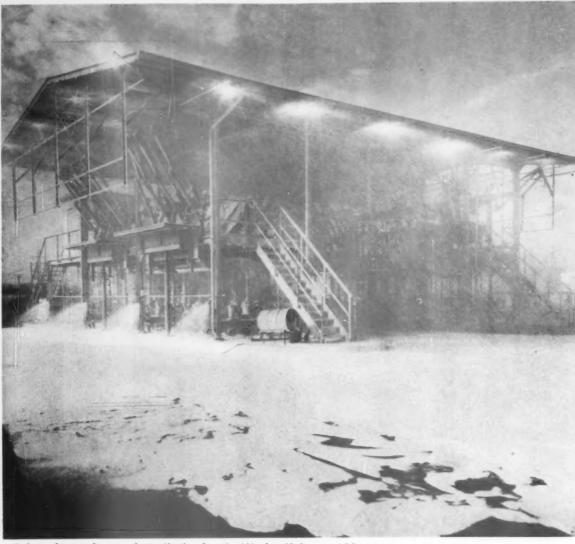
Air flows across the lenses, through slots in the lens caps and seats, out through two indirect screened ventilating ports. Another benefit of Willson research... Kover-Mor lens design makes safety more productive by increasing visibility, comfort, and convenience.



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2 minutes after start of system under test. Note how fire-extinguishing foam blankets potential fire area.

This test shows how Grinnell's Spray-Foam System protects hazardous fire areas

In the dramatic illustration shown above, you see a Grinnell Spray-Foam System under test at a truck loading terminal in Detroit, Michigan. This fire-quenching foam system, designed for hazardous areas, is especially recommended for quelling blazes in petroleum base products, such as in gasoline, kerosene and fuel oil. Grinnell Systems are effective in controlling

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Grinnell Fire Protection Systems include:

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- Carbon dioxide systems
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Circle Item No. 38-Reader Service Card



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Circle Item No. 39—Reader Service Card

National Safety News, December, 1959

AEC Establishes Office Of Health and Safety

Coordination of health and safety programs of the Atomic Energy Commission in a newly established Office of Health and Safety is announced by A. R. Luedecke, general manager of the Commission.

DR. FORREST WESTERN, previously assistant director for radiation protection in the Division of Biology and Medicine, is designated as acting director of the new office. Functions and personnel of two branches of the Division of Biology and Medicine—the Health Protection Branch and the Radiation Effects of Weapons Branch—and the Safety and Fire Protection Branch, Office of Industrial Relations, are transferred to the Office of Health and Safety.

The new office has been assigned principal responsibility, in cooperation with other AEC offices and divisions, for developing and recommending health standards for the protection of workers and the public from atomic-energy-induced radiation.

The new office will also serve as a focal point for AEC relationships with officials of state governments in the area of radiation protection. It will have the additional responsibility of developing policies and recommending standards for protection of personnel in AEC operations from non-nuclear as well as radiation hazards.

Dr. Western has been associated with the nation's atomic energy program since early in 1944, when he became senior physicist for Tennessee Eastman Corporation, a major subcontractor at the Commission's Oak Ridge, Tenn., installation.

Later in 1944 he became director of the mass spectrograph laboratory at the Commission's Oak Ridge National Laboratory. From 1945 to 1951 he had responsibility at Oak Ridge for assisting in administrative and technical phases of a program to provide radiation protection to laboratory personnel.

In mid-1951 Dr. Western was transferred to Washington to serve as a health physicist in the Division of Biology and Medicine, with principal responsibility for developing health physics programs and for assisting AEC plants and laboratories on health physics problems.



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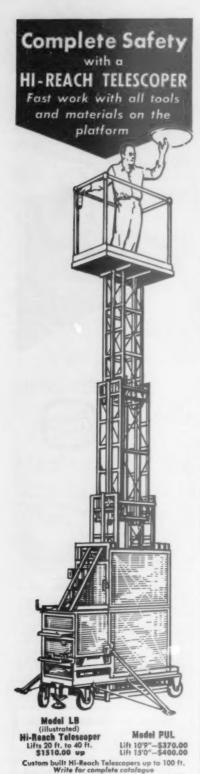
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VOICE OF THE READER

Let's have your views on current topics. You don't have to agree with us

"Ideas" Gave Them an Idea

BALTIMORE, MD.—It was a real pleasure for me to receive your letter indicating that my idea "Picture of a Safe Worker" has been selected as the best idea in the October issue of the NATIONAL SAFETY NEWS.

I have looked over the list of awards and while my family feels that I should receive a new Cadillac, I am willing to settle for item No. 2, the Kaywoodie Matched Grained Pipes.

You may be interested to know that during the National Safety Congress at Chicago many of my acquaintances told me they had read the article and several of them planned to give it a trial in their own organizations. It also seemed to be the general opinion of these men that this feature, "Ideas That Worked," is one of the outstanding items in the NATIONAL SAFETY

—H. ARNOLD PERKINS
Chief of Health and Safety Section
Point Breeze Works
Western Electric Co.

Likes "Profession" Article

MIDDLETOWN, OHIO. A feature article in the October issue of NATIONAL SAFETY NEWS, entitled "Toward the Profession of Safety Program Management," by Walter A. Cutter and Thomas H. Wilkenson, defines the job of the person responsible for coordinating the safety activities of a company or a plant of a company. The article is so impressive that I am calling it to the attention of some twenty-five persons handling our safety programs.

-C. M. ALLEN
Chief Safety Engineer
Armco Steel Corporation

BUFFALO, N. Y. Hats off, three cheers, a bucket of roses, etc., etc.,

to writers Cutter and Wilkenson for their excellent article "Toward the Profession of Safety Program Management." These views have needed expression for a long time now, and let's hope that the article will create the impetus for freeing the safety profession from the narrow area of engineering once and for all. The term "safety engineer" is not fair to either field.

It seems to me a worthy sequel to this article would be one dealing with the authors' ideas on what specific academic and experiential background the safety specialist should have.

—D. J. HOPWOOD

Safety Director

Becco Chemical Division

Raps Rocket Review

WASHINGTON, D. C. Mr. Gartner's review of *The Rocket Handbook* for Amateurs is an interesting example of the conflict between science and safety. He very frankly expresses his doubts concerning the wisdom of placing such information in the hands of young amateurs, then closes by praising the book as filling a void in the literature on rocketry.

As a member of the Home Safety Conference, I would urge that, if possible, you supplement this review in the September issue by some reference to the recent report of the American Rocket Society, particularly its policy statement and program objective, which reads:

All practical means must be taken to prevent the manufacture of propellants or rockets by amateurs. The launching of rockets by amateurs must be prohibited.

Colonel John P. Stapp, in his introduction to the report, says:

It is not intended as a guide for amateur rocketry clubs. The report should therefore be kept out of the hands of experiment-



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ers, and especially teenagers, because illustrations of dangerous practices and formulas for hazardous propellants are included as examples.

I believe it would be most helpful to your readers, and National Safety Council members of all divisions, if these views could be widely disseminated.

EUGENE L. LEHR Department of Health. Education, and Welfare

Rocket Reviewer Replies

PARK FOREST, ILL. A copy of your letter of September 15, 1959, to the National Safety Council has been forwarded to me. As you noted in my review of Col. Parkin's book, The Rocket Handbook for Amateurs, I questioned the wisdom of including propellant formulation data in this book. It has been and still is my belief that the compounding of rocket propellants and the

loading and firing of rockets should be kept out of the hands of amateurs.

However, this negative approach is not enough. My experience, gained from contacts with over 100 active amateurs, indicates that the negative approach of "don't play with rockets" will fall on deaf ears.

I don't believe there are practical means that can be taken to prevent amateurs from building rockets, due to the dedication, energy, and intelligence of these boys. I believe there have been as many successful rocket firings in the parks of metropolitan Chicago as on Cape Canaveral.

The problem, as I see it, is not to prevent the amateur from working with rockets, but to insure that he will not be injured while engaged in his project.

I am sure you will agree with me that the safety problem of amateur rocketry is not to eliminate the endeavor itself, but to eliminate the hazards involved.

The problem, then, is how to reduce the probabilities of accident in amateur rocketry to a level that is acceptable. Col. Parkin's approach is to accomplish this reduction of accidents by education. By showing how to design a rocket properly, discussing the hazards, listing precautions, and proposing "safe" propellants, Col. Parkin et al. have no doubt reduced the accident rate. Is this reduction in the accident rate enough? I think not; there is no "safe" propellant.

On the other hand, the American Rocket Society has forbidden experimentation. This position is unrealistic. The boys, encouraged by Russian success, goaded by Cape Canaveral failures, and excited by newspaper publicity of other ama-



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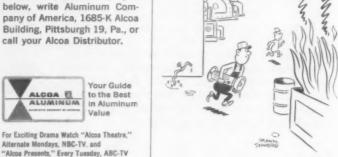
Injury no longer travels this ramp. Keeping it at bay is Alcoa® Aluminum Abrasive Tread Plate with its hard, abrasive surface that remains slipproof even when wet, oily or greasy. It is made with tough particles of fused aluminum oxide and is the only nonskid floor plate that gives all the advantages of lightweight, corrosion-resistant aluminum. Because wear only serves to renew the surface by uncovering abrasive particles imbedded below the original level, it offers lasting protection against slipping accidents that can injure skilled workers, cause expensive production breakdowns and up insurance rates.

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teurs, will continue, surreptitiously if need be, to build and fire rockets. They will interpret the American Rocket Society's position as a "hang your clothes on a hickory limb but don't go near the water" statement. The net result of the ARS position is that accidents will continue virtually unabated.

If I had to choose one of these two means of reducing amateur rocketry accidents, I would choose Col. Parkin's. However, there is a third way which I feel has the advantages of Col. Parkin's approach but goes further. Essentially, this third approach is to teach the boys how to design the rocket and let them build it, except for the propellant. The propellant is to be made by an established firm and the rocket loaded and fired by experienced specialists. In this manner the amateurs do not make their own propellant, load their rocket, or fire it. Consequently the chance of their being injured is eliminated.

On the other hand, study of the characteristics of the high performance propellant, the engineering and scientific knowledge offered, and the sanctioned firing program are sufficient to hold their interest so they do not go off into these areas on their own. More details of this program are contained in the NATIONAL SAFETY NEWS of August 1958 in the article "Let's Help Our Teen-Age Rocketeers."

It is my understanding that the National Safety Council supports the third approach. This approach is in complete agreement with the American Rocket Society's policy statement quoted in your letter. The major difference is—what is a practical means of channeling the interest and energy of space-minded youth?

-ROBERT F. GARTNER

Research Engineer, Ballistics Section, Armour Research Foundation, Illinois Institute of Technology

LATEST NEWS INDEX READY
The index for Vol. 79, January-June, 1959 of the NATIONAL SAFETY NEWS is now available from the NSC Library.
Address: Librarian, National
Safety Council, 425 N. Michigan, Chicago 11, Ill.

Earthquake Tests "Plan Bulldozer"

The story of how the construction industry mobilized millions of dollars of equipment and about 150 workmen in a matter of hours to rescue 250 persons during the recent Montana earthquake, and later averted a threatened second disaster, was told at a recent meeting of officials of The Associated General Contractors of America.

Robert M. Hoover, Kansas City, Mo., chairman of the AGC Disaster Relief Committee, reported on the Montana disaster relief operation to the annual Midyear Board Meeting of the AGC in Kansas City, Mo.

He said the Montana earthquake was the first occasion on which "Plan Bulldozer" was put into operation. This is the AGC's plan through which the enormous resources of the nation's construction industry could be used to help avert disaster or aid in relief of victims.

"Plan Bulldozer" was developed by the national AGC (but it can only be put into effect by the organization's 125 chapters and branches or other construction organizations. So far, about 20 AGC chapters have adapted the plan to fit local requirements.

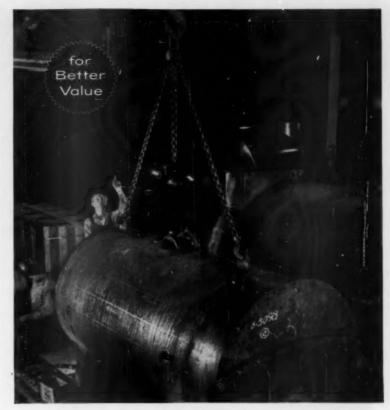
During the earthquake at Yellowstone National Park it was the Montana Contractors' Association, an AGC chapter with 45 general contractor members, which implemented "Plan Bulldozer."

The earthquake hit about 11:30 p.m., August 17, and six hours later J. W. Marlow, secretary-manager of the Montana Contractors' Association was conferring with Montana civil defense officials and offering the resources of his organization for relief work.

Early that same morning, con-



"A top machinist like you must have some idea why the safety man picks on you."



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HUNTINGTON LABORATORIES

Huntington, Indiana • Philadelphia 35, Pennsylvania • Toronto 2, Ontario Circle Item No. 47—Reader Service Card struction equipment of AGC contractors was sent into the disaster area by Mr. Marlow to cut an access road through to about 250 persons trapped between a land-slide and Hebgen Dam. By the end of the day all of the trapped persons had gotten out of the danger area, most of them by way of the newly-completed emergency road.

A week later, the Army Corps of Engineers contacted Mr. Marlow, and arrangements were worked out for contractors to move into the area to cut an emergency spillway through the slide to avert a threatened flood. The slide had blocked a river, and unless action was taken to prevent water rising too high behind the slide, there was the threat of the slide barrier bursting and spreading flood waters over a valley below the disaster area.

Mr. Marlow called on his chapter members again, and they responded almost immediately. Some of them were working on the spill-way later that same day. Others had to pull equipment off construction jobs as far away as 300 miles. In two days, most of the equipment needed was working to cut a spill-way through the slide that was 300 ft. high at some points.

The spillway was cut through in about two weeks. It was almost a mile long and was lined on the bottom with 10 ft. of rock to prevent washing out. The spillway released the water created by "Quake Lake" when it reached high enough, and prevented a sudden breakthrough that could have caused a flash flood.

The work was carried out under hazardous conditions. The workers could not depend absolutely on the slide barrier to hold the water until completion of the spillway. In addition, continuing tremors caused further landslides.

Because of the vibrations of their machines, equipment operators who could not tell when a tremor was occurring used three boulders stacked one on top of the other as a safety gauge. Their instructions were that, if the top boulder fell, they were to evacuate the area.

In addition, the contractors furnished lighting equipment, so work could continue around the clock. The contractors also arranged housing and food for workers near the disaster site.

Ten-Finger Safety

-From page 35

cate on department cost records each month the cost figures for gloves and other hand protection, as well as cost of injuries and compensation payments. These figures will certainly impress a supervisor, since they're something he can't regain, and the cost of accidents are never budgeted for in any organization.

In our company the supervisor is responsible for issuance of requisitions for gloves and other safety equipment to the employee. But it's the supervisor's right to see the gloves, hand pads, arm guards or other devices are worn to the point where they should be replaced.

Of course, there are some workers who like to get new gloves daily. This can raise costs. Paradoxically, if the employee were paying for these gloves, it's almost certain he could get at least one week's work from each pair.

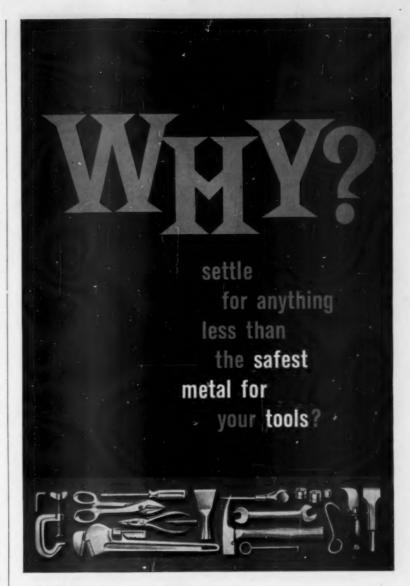
We also have a laundering service that's a real asset to our safety program. Each week we have our stores division gather from every tool booth all soiled or worn pairs of hand pads, arm guards, gloves, aprons, spats, and leather sleeves or leggings.

We send this equipment to the laundering service, and the following week these items return cleaned. Patching is also done, and when we get gear back for reissue, it looks about as good as new. Savings certainly justify the service.

If you're just going into a glove program, first make an analysis or survey of all operations in your plant as to where gloves or other protective equipment may be required. Does the operation warrant gloves, or can conditions be changed so work can be handled without gloves?

Can parts be delivered to the next operation by conveyor to avoid handling by hand? Can rough edges be removed in a primary operation, so everyone handling parts in subsequent operations would not require gloves? These are pertinent questions and money-saving ideas, if applied.

If you've a specific problem and you can't reach a satisfactory answer on what protective measures



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In many instances, a workman wearing garments made of "Scotch • shield" Aluminized Fabric can do maintenance or repair work in a few minutes while the kiln or furnace is close to working temperature! Protective clothing made of "Scotch • shield" Fabric reflects more than 90% of radiant heat... a full suit made of it will keep a workman near normal body temperature even when facing a temperature of 2440° F!

Garments made of "Scotch shield" Aluminized Fabric are lightweight and flexible, let workmen move easily and comfortably, get dangerous maintenance work done quickly! Tough "Scotch shield" Aluminized Fabric protects from splatter too . . . lasts much longer than conventional clothing. Why not send the coupon below for complete details?



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should be used, don't hesitate to call in suppliers of gloves or other safety equipment. Let them see what the problem is. Get their advice on what they'd recommend to fit the job.

Manufacturers' agents are qualified persons, for the most part. They're at your service to help you settle your problems in the field of safety protective equipment. They'll do their best in providing you with equipment. Poor judgment on their side can mean loss of sales, and they're looking for your continued business.

When you've an acid or other corrosive problem in your shop, affecting wearing quality of gloves, let the supplier know. He'll provide the proper type of equipment.

Retain good relationships with your vendors. They're the ones on whom you must depend to keep you equipped with goods to reduce injuries. Deal with more than one supplier. In the event one runs into labor troubles, you can continue to secure the required material from another source. This is also a good idea from the standpoint of competitive prices.

Sometimes in your plant you don't have space to store large quantities of equipment needed steadily. Arrange with your supplier to stock material in his warehouse and deliver so much monthly. In this manner, you'll keep inventory down but will be assured of an adequate supply of protective gear.

Once you've bargained for a particular type of glove or hand pad, get the specifications for this equipment and give them to your firm's purchasing division. In this way every vendor bidding on equipment will know what's required and can base his price accordingly.

Have the material spot-checked periodically or by shipment to determine if it meets standards called for in specifications. If it fails to meet your standards, don't hesitate to return the shipment at once for replacement.

On many occasions we've made lengthy tests on new or modified type gloves and hand pads but will not make any commitments on their application until we're satisfied they'll do the job.

When we test these gloves, we

don't give them to just any employee. Instead, we give them to the worker who wears gloves the hardest or complains he's not getting enough wear from the present type of gloves or hand pads. This is the worker who'll really give the sample goods a fair test, since he wants better protection for himself.

If you receive complaints from those using equipment, don't fail to investigate. It may mean savings of many dollars in future shipments of these goods.

For example, if you've a complaint from your workers that gloves are too tight fitting and don't bother to investigate, the workers get to the point where they'll go without gloves.

Soon they're suffering from severe lacerations, and your company will be paying in costs of the injury rather than determining why you buy gloves that are not fitting your employees.

Familiarity with protective products is important. Many people are unaware regular canvas gloves are made in two sizes, one for males and the other for females. Another factor is the weight of canvas, and the grade of material. You should know these facts, so you can deal effectively with your suppliers on these items.

Costwise, in 1958 our company paid \$30.58 per employee for his safety equipment. This included gloves, hand pads, arm guards, safety glasses, aprons, respirators, welding protective equipment, and other safety devices. In 1958 our safety program, including compensation and preventive expenses such as safety and medical personnel salaries, involved expenditure of \$57.90 per employee.

It may appear sometimes that safety costs a great deal more than you can say you get back for it. But just take six serious accidents a year in any shop or plant, and you'll find the costs on these six cases will more than pay for a basic safety program.

On the other hand, perhaps you're providing too much equipment, which could slow down the job if the employee must wear too many pieces of apparel.

Where a hand pad may be sufficient to do a job safely in one instance, in other jobs of greater hazard the employee may be required



The easiest-to-operate portable fire extinguishers on the market today!

Here, for the first time, is a practical, sensible design for pressurized water and loaded stream extinguishers. No inverting, no bumping, no valves to turn, no pins to pull (safety lock automatically releases when nozzle removed).

These two new stainless steel Kidde portables feature simple, one-two operation—just aim at fire and push the button. Notice the way the hose is stored, safely out of the way. Notice the wide-open handle—to insure fast action even in gloved hands. Notice the dust-and-waterproof pressure gauges—which show at a glance whether the units are fully charged. All of the features—plus the slim design and light weight of these Kidde portables—make them the easiest-to-store, easiest-to-carry, easiest-to-operate portables on the market today.

Approved by Underwriters' Laboratories. Available in pressurized water for fires in ordinary combustibles, or anti-freeze loaded stream for fires in ordinary combustibles and flammable liquids. For more information, write to Kidde today.



Walter Kidde & Company, Inc. 1245 Main St., Belleville 9, N. J.

Walter Kidde & Company of Canada Ltd., Montreal – Toronto – Vancouver

The words 'Kidde', 'Lux', 'Lux-O-Matic', 'Fyre-Freez' and the Kidde seal are trademarks of Walter Kidde & Company, Inc.

1050

Circle Item No. 50—Reader Service Card

to wear a pair of canvas gloves with a hand pad over the gloves and an arm guard to protect his arms from metal edges. With any less equipment, the worker would suffer slashed arms and lacerated palms of both hands.

Incidentally, our firm uses terrycloth, 12 and 18 oz. canvas gloves, rubber or neoprene gloves, leather gloves, steel-studded gloves, plastic coated gloves and asbestos gloves. Each of these types have certain applications and are used only in those applications. Workers needing any of these special makes or styles of gloves must get approval from the Safety Department.

Finally, here's a five-point list of ways in which finger and hand injuries can be prevented:

- 1. Analyze all finger and hand injuries in your plant, together with their causes, and provide corrective measures, wherever possible.
 - 2. Guard machinery safely.
- 3. Give specific instructions, when assigning a job.
- 4. Provide the most efficient materials handling arrangements.
- 5. Instruct employees in the safe operation of equipment.

Circle Item No. 51-Reader Service Card





Circle Item No. 52—Reader Service Card

Three Dimensions

-From page 19

well as a hand-me-down suit.

The first step in designing a safety program should be to make a careful analysis of company's safety needs today and for the foreseeable future. How well is company management living up to its safety responsibilities? What is needed to improve the record of Plant A? What is needed in the shipping department at Plant B? What is needed to improve the safety record of a turn foreman in a blooming mill? It is raw data like these that must be processed and used to improve the program.

Tools must be analyzed just as carefully as needs. What tools do you have available that can implement your program?

Mainly, there are four: judgment, experience, reinforcement, and inspiration. There are others that might be mentioned, but these are the great production tools that get the job done.

By the use of good judgment on the part of our engineers, safety men, and supervisors, you can eliminate hazards by careful design of machines and plant layouts, by good planning, by systematic inspection, and by careful analysis of factors which may lead to accidents.

By using your accumulated experience to teach others, you can help employees recognize unsafe conditions and practices, and help them to think safety for themselves.

By the use of reinforcement—constant review, drills, posters, bulletin boards—you can build safety habits.

Through the use of inspiration—meetings, personal contact, appeals to emotion and common sense—you can help men assume more responsibility for themselves.

These are powerful tools. Properly used, they can convert a safety program from a chore into a crusade.

But goals and tools are not enough. A plan is needed, too. Planning is to a safety program what a blueprint is to an engineer.

In Republic, our long-range program is the result of many years of refinement. It sets the pattern of our safety organization throughout

the corporation, beginning with the general safety committee, and extending downward through the districts, departments and work groups. It assigns specific responsibilities and duties at each level, covering accident prevention, good housekeeping, fire protection, health and rehabilitation.

We have found we get the best results when the long-range program is supplemented with special programs of more limited scope. "Operation CAP" set the pattern for 1958. CAP means "Contributions to Accident Prevention," and was aimed toward two specific objectives. In departments where the safety record was perfect, the objective was to keep that record unblemished. In other departments, the objective was to improve on the best safety performance in any previous year.

These records, in turn, became goals for still further improvement in the special program for 1959, which we named "Operation CAP Alert." This program is designed to fill five specific needs highlighted by last year's experience.

First, we are giving a series of safety training sessions to supervisors.

Second, we are emphasizing written job safety analyses.

Third, we are intensifying our investigation of accidents.

Fourth, we are re-emphasizing the 15-minute safety inspection for foremen on each turn.

Fifth, we are taking steps to improve "plant-keeping" standards on a corporation-wide basis.

The final step in setting up a safety program is to provide for built-in quality control and feedback. This means that records must be kept up-to-the-minute, and analyzed on a day-to-day basis. The results can then be fed back into the operation to keep the program abreast of changing conditions.

This is an obvious need in any safety program, but one that is easy to overlook. Once a program gets under way, it has a certain momentum. People are busy carrying out the routine work assigned to them. Unless it is a planned activity, the job of measuring results or reporting on changing conditions may be left undone. Evaluation and feedback must be built in if they are to be effective; built in to make sure



Circle Item No. 54-Reader Service Card



STOP SLIPS, FALLS with FERROX



Millions of tiny, sharp, abrasive particles in Ferrox provide safe non-slip footing on all surfaces, wet or dry. Resists oil, chemicals, water and weather conditions. Adheres firmly to wood, concrete and metal. One gallon covers approximately 35 square feet. • Write for Ferrox Bulletin.

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ME	CARBON	DIRECTLY WITH THE DOXOR® MONOXIDE INDICATOR IS REMARKABLY SIMPLIFIED IN- RUMENT INDICATES CARBON MON- IDE PERCENT IN THE AIR SAMPLE TESTED BY MEASUREMENT OF CO-STAIN IN THE IN- DICATING TUBE.
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	IDUSTRIAL INSTRUMENT CO., 200 N me a copy of MONOXOR CO	I. BRADDOCK AVE., PITTSBURGH 8, PA. Indicator LEAFLET 890A
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everyone's cooperation is assured.

Infractions of safety rules must not only be observed, they must be corrected. This means that safety inspections must not only be made, they must be written up. Reports must not only be written, but read. They must not only be read, but analyzed. They must not only be analyzed, but acted on. I might add that both reporting and analysis must be honest—painfully honest—if they are to be effective.

This brings me to one final point. Safety training consists almost entirely of words, written or spoken, and demonstrations. Good communications is vital to a safety program. Communications is the nervous system that joins all the parts of the program into a living, dynamic whole.

To be fully effective, safety communications must be free to move in three directions. The communications network must carry safety policy downward; it must carry safety needs and suggestions upward; and it must spread safety training and ideas horizontally to every man at each level of the company.

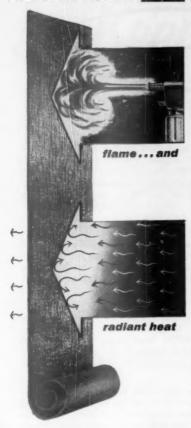
The channels from top management downward are usually open, but sometimes they carry very little traffic. Safety policy is left to people far down the management ladder, and the program suffers—not because the men on the lower rungs are not qualified, but because they need the inspiration and enthusiastic support of the men who have reached the top. When this support is present, downward communication is no problem.

In many companies the upward passage of safety needs and contributions is often blocked. This can be a serious loss. In the first place, good upward communications is the only guarantee that top management will have an accurate picture of safety problems and needs. And without an accurate picture of conditions, they can't make realistic policy.

In the second place, an active safety campaign stirs up a lot of thinking about safety on the part of the men, and their ideas are valuable. Good upward communications stimulates this flow of ideas, and makes every man a safety man.

Horizontal communications

NOW CONTROL BOTH



...with new J-M Aluminized Asbestos Cloth

An economical and easily worked combination of aluminum foil with asbestos fabric, J-M Aluminized Asbestos Cloth provides heat and flame resistance which exceeds that of either of the materials used alone.

The aluminum foil helps reflect 90% of all radiant heat—the major cause of worker discomfort, fatigue and inefficiency. The fireproof asbestos supplies flame-resistant sturdiness. In combination, the aluminized asbestos cloth retains great strength, even after long exposure to temperatures to 1400°F.

For data on J-M Aluminized Asbestos Cloth for curtains, shields, blankets, hoods, and other needs—write Johns-Manville, Box 14, New York 16, N. Y. In Canada, Port Credit, Ontario.

JOHNS-MANVILLE

Circle Item No. 56-Reader Service Card National Safety News, December, 1959 aimed at a particular work level sounds easy. Every time you distribute literature, or hold a safety meeting, you are carrying out horizontal communications. But how effective is it?

Does your written message reach every man and hold his attention? Does every man at a safety meeting understand the meaning of the safety message? Is the message vivid enough to make him realize that accidents can happen to him? Is your message improving his safety performance?

Until every man gets the message, understands the message, feels the message and acts on the message, your horizontal communications effort is inadequate.

There is another aspect of safety communications that should be mentioned, too. We need to improve the exchange of safety ideas between departments, between plants, between companies, and even between industries. This is an area where great progress could be made.

Building a safety program is a hard job. But it is a job that carries a high reward to those who find satisfaction in human service.

"Next to creating a life," Abraham Lincoln once said, "the greatest thing a man can do . . . is save a life."

And I would add, "... or save an arm, or leg, or hand, or the happiness and income of a family." For that is our job: saving lives, preventing injuries, saving men and their families from the personal tragedies that once took such a heavy toll.

But safety is not all altruism. Republic's motto "Safety—Quality—Service" indicates that we think safety is good business, too. Safety guards know-how and experience. Safety prevents loss of time and production. Safety raises efficiency and morale.

So let's think safety until we have a clear-cut philosophy of safety.

Let's plan safety until we have a thorough and lively safety program.

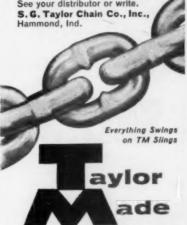
Let's work at safety until every man in every department understands safe practices and builds safe working habits.

Let's make safety for every man the goal of American industry.

TOPS in STRENGTH

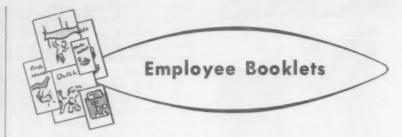


You'll find TM Alloy Chain is used wherever rugged "brute strength" is a requisite. For example—the working load limit of 3/4" TM Alloy is 23,000 pounds. It's tougher, safer and far less costly than other grades of chain tested. Assemble your own slings with TM Hammerlok links, or order to your specifications. See your distributor or write.



CHAIN SINCE 1873 Circle Item No. 57—Reader Service Card





EMPLOYEE education booklets are a basic part of your safety program. The National Safety Council publishes a wide variety of such booklets which can help shape sound safety attitudes or instruct your employees in the safe practices related to their work or off-the-job activities. Sample copies of recent booklets are available by circling the key number of the ones you want on the Reader Service Card at the back of this issue.

ARE YOU SAFETY MINDED?

An amusing "rogue's gallery" of cartoon characters representing "types" of unsafe workers. An effective way to reach employees having the same attitudes and ways to help change them. Stock No. 192.15. Sixteen pages, 3¾" x 8", full color illustrations. Circle No. 510—Reader Service Card.

TIME FOR FUN

"Careless driving is just a lot of waste motion," this new vacation safety booklet advises. Its purpose is to help bring your employees back from vacation safe and sound. Stock No. 194.38. Eight pages, 3¾ " x 8", full color illustrations. Circle No. 512—Reader Service Card.

WHAT'S IN IT FOR ME?

This booklet takes a good, hard look at the whole idea of safety—strictly from the worker's point of view. It shows how the worker stands to profit from a good safety record and it explains management's motives in a forth-right way. Stock No. 192.09. Sixteen pages, $3\frac{3}{4}$ " x $8\frac{3}{4}$ ", full color illustrations. Circle No. 513—Reader Service Card,

A PROFESSIONAL CODE FOR DEFENSIVE DRIVING

Dedicated to the millions of professional drivers who developed and refined the concept of "defensive driving" as their approach to the hazards of the highway, this booklet presents the defensive driving technique for all drivers. Stock No. 294.09. Twenty pages, 51/4" x 81/4", multicolored illustrations. Circle No. 514—Reader Service Card.

ACCIDENTS IN THE OFFICE

Brightly colored and presented in an eye-appealing way, this new booklet will help alert your "white collar" staff to the common hazards found in their occupational environment. "Accidents in the Office" fills a long-felt need. Stock No. 195.50. Eight pages, 3¾ " x 8", two-color illustrations. Circle No. 515—Reader Service Card.

BEFORE IT'S TOO LATE!

Dedicated to "all the brave firemen who try to arrive before it's too late," this booklet tells the tragic story of home fires and how to prevent them. Real-life pictures taken at the time of a fire help dramatize the message. Stock No. 599.82. Twelve pages, 3¾ " x 8", two-color photographs and illustrations. Circle No. 516—Reader Service Card.

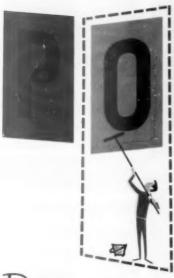
FRED FLAME, THE FIERY DELINQUENT

Somewhat humorous in approach, this booklet deals with the deadly serious problem of preventing industrial fires. Written in a simple, direct style, it should drive the message home to your employees. Stock No. 195.81. Sixteen pages, 334" x 8", illustrated. Circle No. 517—Reader Service Card.

For information on other Council employee training publications write to National Safety Council, 425 N. Michigan Ave., Chicago II.

Keep Em

NEW SAFETY POSTERS DECEMBER, 1959









FOR EFFECTIVE RESULTS IN YOUR SAFETY PROGRAM

Put new posters up... hold your accident rate down



JUMBO POSTERS

Giant safety messages that are 11'8" wide by 9'11" high. Colorfully printed and weather resistant, these posters command attention. Issued monthly, JUMBO gasters will add drama and impact to your safety program get big results!

SAFETY BANNERS

A powerful safety message, skillfully designed and colorfully printed on cloth. They measure 312 ft. high by 10 ft. long. Available in 2 types—outdoor





More Important Than Things is YOUR SAFETY!

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17×23



NO MATCHIE AND HO SMOKING STAND TO WINDWARD SIDE WHEN CHRISTIC HATCHIS

WEAR MASK WHICH GAGING TANKS CONTAINING H.S GRASP RAIL

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AVOID AN INJURY

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1786-A

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THERE'S AN EFFECTIVE POSTER

... for every problem

Other posters to fit your needs can be

Hote that many posters now shown in the 1989 Electory may not be crelicible ultor December 31, 1959. After that date, use the safe 1960 earner in your planning for the



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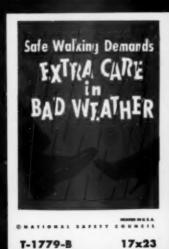




















YOUR POSTER PROGRAM SELLS SAFETY . . . 'ROUND THE CLOCK!

You can't beat National Safety Council posters for adding visual impact to your safety program. They're the "color spectaculars" that make repeated visual impressions of the importance of safety in your workers' daily lives, in and out of the plant. Poster subjects should be related to plant accident experience, thus pinpointing causes, hammering home prevention ideas and achieving effective results. For further information or program planning aid, write direct to the Membership Service Division, National Safety Council.

Here's how to use posters most effectively

PLACE POSTERS STRATEGICALLY.
Tell the effectiveness of different locations. Use short "fissh"

Provide balletin boards or frames for displaying your postquate lighting, natural or electric, so they can be easily seen and read. Select the proper height for display in locations where viewers are and any or sealed. Do not crowd too many in one location or clutter them by surrounding with

maxinum interest and attention, keeping workers aware of

ORDER YOUR

POSTERS

TODAY!

Cash in on the timeliness, repetition and continuity of a poster program by placing your order now. Order posters from these pages or refer to the National Safety Council 1959 Poster Directory. The complete directory is

available for 60c a copy. An automatic monthly poster service is also available at an annual low cost. Write The National Safety Council for further information. POSTER PRICES*

Cat. No.	Type and Size	Single	to 9	10 to 99	100 to 999	1000 to 4999
182.13	"A" (81/2x111/2")—Any selection, each			3 .12	\$.07	\$.06
182.23 381.23	"B" (17"x23")—Any selection (except prefix "T"), each "B" (17"x23")—Any selection with "T" prefix, each			.23	.195	.155
381.31	"C" (25"x38")—Any selection	.40	.40	.30	.24	.22
184.41	JUMBO POSTERS — Annual subscrip., each (12 posters)	\$ 69.00	67.00	65.00	61.00	
188.51 188.61	SAFETY BANNERS — Annual subscrip., each (12 banners) INDOOR OUTDOOR	93.00 100.00	87.00 95.00	83.00 90.00	79.00 85.00	

^oMembers receive 10% discount on these prices. Please enclose check or cash with orders less than \$3.00. Prices are subject to change without notice. Quantity prices apply only on a single shipment to one location. Other terms are stated in official price lists.



Personals

-From page 60

veloping and recommending health standards for the protection of workers and the public from atomic-energy-induced radiation, working with state government officials on radiation protection, and formulating policies and recommending standards to protect atomic energy personnel from non-nuclear and radiation hazards.

For the past two years, Dr. Woodruff has been the Commission's scientific representative in the U.S. Embassy at Buenos Aires, Argentina, where he assisted South American countries in developing and implementing cooperative programs with the United States in the peaceful use of atomic energy.

Dr. Woodruff joined the Manhattan Engineer District staff at Oak Ridge, Tenn., in June 1946 as a technical consultant in biology in the Isotopes Branch and continued in this position when the Commission was established Jan. 1, 1947.

From July 1952 until bis appointment to the Buenos Aires post in August 1957, he was assistant manager for operations at Oak Ridge, coordinating and providing technical and administrative direction for the operational programs of the production, feed materials, isotopes, and research and medicine divisions.

CAPT. WILLIAM S. JOHNSON, CEC, USN, is the new director of the Safety Division, Office of Industrial Relations. He replaces CAPT. H. L. MATHEWS, CEC, USN, who will work with the Bureau of Yards and Docks.

Since September 1956 Capt. Johnson has been assistant inspector general of the Bureau of Yards and Docks. He was graduated from the University of Minnesota in 1931 and joined the U.S. Naval Reserve in 1936 as Lieutenant (jg) in the Civil Engineer Corps, transferring in 1946 to the U.S. Navy.

From August 1940 until February 1944, he served as Public Works Officer and Resident Officer in Charge of Construction at the Naval Air Station, Anacostia, D.C. His next assignment was in the District Public Works Office, 14 N.D.

Positions since 1946 have in-





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EYE PROTECTION
MUST BE WORN
IN THIS AREA

READY MADE SIGNS are made in accordance with American Standards Association Specifications for Industrial Accident Prevention. DANGER

DO NOT ENTER
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WEAR GOGGLES WHEN USING THIS MACHINE



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Circle Item No. 60—Reader Service Card

cluded: Assistant PWO, later PWO and Officer in Charge of Construction, NAS, Jacksonville, Fla.; Deputy Officer in Charge of Construction, Marianas; Manager, Ships and Fleet Facilities Branch, and Coordinator, Overseas Construction, Bureau of Yards and Docks; PWO, Portsmouth Naval Shipyard,

From July 1955 until June 1956 he was a student at the Naval War College, Newport, R.I., and then reported to the Bureau of Yards and Docks for duty at the Inspector General's Office.

I. B. "SCOTTY" PATERSON recently has joined the Safety Department of Eitel-McCullough, Inc., San Carlos, Calif., manufacturer of Eimac electron-power transmitting tubes.

Prior to Eimac, Paterson served as safety engineer at Workmen's Compensation Insurance Company in San Francisco since July 1957. He was graduated from San Jose State College in June 1957, receiving a B.S. degree in industrial engineering.

From 1952-53 he served in Korea with the U.S. Army Rangers. Prior

to military service, he worked as a geophysical survey engineer with Arctic Contractors in Fairbanks, Alaska, for three years. He is a member of the American Society of Safety Engineers.

The promotion of R. L. CORLEY to safety coordinator for Minute Maid Corporation was announced recently by J. A. Podmore, director of industrial relations for Minute Maid.

Corley joined Minute Maid in 1946 as a truck driver. In 1954 he was assigned to Transportation Safety where, according to Podmore, he has done "an outstanding job."

His experience and background, coupled with the ability he has shown as fleet safety director, resulted in Corley's selection as safety coordinator, Podmore explained.

In his new position Corley is assigned to the Industrial Relations Division and will be responsible for coordinating a safety program covering all divisions within the company.

ARTHUR E. MILLER has been elected to the board of directors of Scott Aviation Corporation, where he has worked for 16 years, the last five as director of research and prior to that as chief engineer.

He is a member of the American Society of Safety Engineers, and is well known for his work as chairman of the SAE Committee on Aircraft Oxygen Equipment and as chairman of the Subcommittee on Breathing Air Standards of the Medical Gases Committee of the Compressed Gas Association.



KLEAR-VU SAFETY MIRRORS are the answer to the dangerous blind corner problem in your plant or warehouse. They are also adaptable for outdoor use in your parking lot, loading dock area or other points where traffic converges.

Mounted at cross aisle intersections, entrances and exits at a height of 8 to 10 feet, Klear-Vu Safety Mirrors clearly reflect

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oncoming intersection traffic to both power truck operators and pedestrians.

Available in either convex or flat glass styles, the mirrors are easily installed and quickly adjustable to any desired angle.

LESTER L. BROSSARD CO.

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IN GAS MASK SELECTION

Special sizes made to order. Polished flat metal mirrors available.

SAFE MASK DESIGN
COSTS INCLUDING MAINTENANCE
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FIT-FATIGUE REDUCTION-VISION



A NEW BROCHURE WITH DOWN TO EARTH INFORMATION ON MASK SELECTION IS READY. WRITE FOR YOUR FREE COPY.

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Circle Item No. 62—Reader Service Card

SUPERVISORY SAFETY ENGINEER

In addition to the basic requirement of an engineering degree, applicants must have had 31/2 years of progressive professional engineering experience, at least one year of which must have been in the field of safety engineering at an appropriate level. Pertinent graduate study may be accepted in lieu of professional experience, but not for the one year of specialized experience in safety engineering. Interested applicants should communicate with the director (Code 1810), U. S. Naval Research Laboratory, Washington 25, D. C.

OBITUARIES

WILLIAM GAVER

WILLIAM GAVER, assistant to the chairman of the trustees of the National Safety Council, died in New York, Oct. 16. Mr. Gaver, who was 63, had been associated with the Council since 1942.

As staff administrator of the Council's Public Service Fund, Mr. Gaver was responsible for carrying out the work of the trustees in obtaining funds from business and in-



William Gaver

dustry for the public service work of the Council.

A graduate of Princeton University, Mr. Gaver was on the consulting staff of the university in fund raising and public relations activities. He also did work in these areas with the visiting nurse services of New York and other organizations. Prior to his association with the Council he had been with the John Price Jones Corp.

Mr. Gaver is survived by his wife, two brothers, and one sister.

H. E. HEDGES

HORACE E. HEDGES, regional safety and training officer for the Intermountain Region, U. S. Forest Service, died recently at his home in Ogden, Utah. He was 58.

Recognized for his work in training movies, he directed *Do It with E's*, and *Horse Sense*, plus assistance with the *Safety for SURE* script.

Mr. Hedges was born in 1901 in

Park City, Utah. After attending the University of Utah, he began his career as a surveyor for the Forest Service, later working at the ranger station in Monticello, Utah.

Prior to the end of World War II, he helped develop an orientation and training plan for returning veterans. Mr. Hedges served as a member and officer of the Ogden-Salt Lake Council of the Federal Safety Council, from which he received the Federal Safety Council Award in 1955 and the Superior Service Award in 1956. He also pioneered in fire safety and was one of the first fire safety officers in Region 4 of the Forest Service.

Circle Item No. 43-Reader Service Card

HIMCO THE ONLY LIGHTWEIGHT NON-CONDUCTIVE Fiberglass Ladder

28 Foot Extension 24 Foot Extension 20 Foot Extension 49 lbs. 38 lbs.

All Ladders Complete

PROVEN—in use by Leading Telephone, Utility, Industrial and Oil Companys.

Full automatic Rung Lock NO RUN-AWAY LADDER

Extension—Straight—Manhole
Tower—4 in I Combination Ladders

FIBERGLASS FIRE LADDERS

NOW OPTIONAL—Aluminum or Fiberglass Rungs

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Unconditionally Guaranteed Immediate Delivery

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Circle Item No. 64-Reader Service Card



MERRILL BROTHERS

56-28 Arnold Ave., Maspeth, N. Y.

Circle Item No. 65 Reader Service Card

Media Pass the Word

-From page 26

offered interviews with accident victims and safety leaders visiting the Congress.

Each of these programs was devoted to a particular phase of safety. Interviewed experts included:

W. O. Wilson, manager of safety for Standard Oil Company (Ind.), and NSC vice-president for industry. Mr. Wilson discussed industrial safety.

Richard L. Brown, assistant director, safety services, American National Red Cross. Mr. Brown commented on recreational safety.

Ray Ashworth, director of field service, International Association of Chiefs of Police, and chairman of the NSC Traffic Conference. Mr. Ashworth stated his views on traffic safety.

Dr. George M. Wheatley, third vice-president, Metropolitan Life Insurance Company, and NSC vice-president for homes. Dr. Wheatley spoke on child safety.

Dr. Walter Cutter, director, Center for Safety Education, New York University, and chairman of the NSC Home Conference. Dr. Cutter was interviewed about home safety.

WMAQ also taped and rebroadcast the annual banquet address, given this year by E. J. Thomas, chairman of the board for The Goodyear Tire and Rubber Company, Akron, Ohio.

Local, regional, and national coverage of the Congress included salutes by many popular network TV and radio programs. These announcements produced terrific impact, based on a foundation of column-inches in newspape; and other media.

Carol Lane Award winners and delegates in farm safety made a number of local radio and TV appearances.

Two TV channels, WNBQ and WGN-TV, offered newsreel films of the annual meeting address to the Congress by Howard Pyle, chairman of the trustees and president of the National Safety Council.

And four newsreel services—WGN-TV, WBBM-TV, WNBQ, and WBKB—provided TV coverage of the school bus emergency demonstration held during the Congress.



Circle Item No. 66-Reader Service Card

syanth Ave., N. Y. 1, N. Y.

National Safety News, December, 1959

Calendar Contest For September



(Individual James Banks Member) of Albany, Ga., won the \$100 first prize in the National Safety "Safety Saying" Council's with this line:

Finds sad way her Mom's notice to get.

The contest appears monthly on the back pages of the Council's calendar. The theme for the September contest was "Watch Out for Kids."

Second prize of \$50 went to Mrs. Donald Tierney (Individual Member) of Janesville, Wis. Her entry was:

Proved "Keep up with the Joans," or regret!

Clarence E. Davis of Arizona Public Service, Red Rock, Ariz., won third prize of \$25 for this line:

Will pay mama's LAXident debt! The 30 winners of \$5 prizes are:

Mrs. Alvin H. Taege (Individual Member), Denver, Colo.

Walter O. Menning, Alpha Portland Cement Co., LaSalle, Ill.

George L. Bacon, Sealright-Oswego Falls Corp., Fulton, N. Y.

T. Ahlgren, Standard Oil Co. (Indiana), Whiting, Ind.

Miss Mary C. June (Individual Member), Seattle, Wash.

Mrs. Howard D. Fountain (Individual Member), Iowa City, Iowa.

Mrs. John E. Trew, Milwaukee Resistor Co., Milwaukee, Wis.

Mrs. Emil Wohlenhaus (Individual Member), Mora, Minn.

Mrs. D. F. Greer, Fort Bliss Ordnance Shops, El Paso, Tex.

Mrs. Frank Lee (Individual Member), Salt Lake City, Utah.

Miss Edna F. Elsaser, The Carlcraft Co., Booneville, N. Y.

Miss Joan E. Reisman (Individual Member), Pittsburgh, Pa.

Mrs. John Ignatuck (Individual Member) Hibbing, Minn.

Marion Randisi (Individual Member), Albany, Calif.

Mrs. Herbert A. Scherer (Individual Member), Fort Wayne, Ind.

Miss Margaret E. Fish, Cheney Brothers, Inc., Manchester, Conn.

Miss Betty M. Swinger (Individual Member), Grand Rapids, Mich.

Miss Alice T. Ragland (Individual Member), Lexington, Ky.

Mrs. Gene Hull (Individual Member), Portland, Ore.

Mrs. A. Anderson (Individual

Member), San Francisco, Calif. Charles T. Wade, Radio Station WFLA, Tampa, Fla.

Mrs. H. J. Paugh, Goodrich Tire &

Rubber Co., Oaks, Pa.
Mrs. W. N. Sanders, Tennessee Coal & Iron Division of United States Steel Corp., Fairfield, Ala.

Mrs. Emil Karchnak, Bethlehem Steel Co., Johnstown, Pa.

Mrs. Catherine Volk. Sealtest Foods, Louisville, Ky.

Capt. John H. Olson, Everett Police Dept., Everett, Wash.

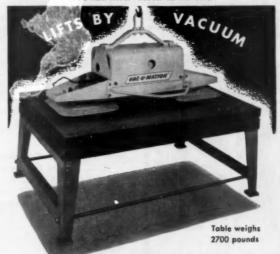
Mrs. W. R. Mitcham, Sandia Corp., Albuquerque, N. M.

Roy Hopkins, Lake Superior District Power Co., Ironwood, Mich.

Miss Lenore Pyle (Individual Member), Denver, Colo.

Mrs. Robert C. Blalock, Henry County Livestock Association, Abbeville, Ala.

Clicle Item No. 67—Reader Service Card



with SAFETY and ECONOMY

VAC-U-MATION SHEET LIFTERS shorten man-hours, cut handling costs, pay for themselves F-A-S-T. Models available from manually-operated units to completely automatic models with capacities for handling up to 2,000 lbs.



VAC-U-MATION DIVISION Write for NEW Catalogi



Why use expensive cord for marking danger areas?

for economy

and high visibility use

BLUE JAY BRAND

Brilliantly visible, BLUE JAY Brand SAFETY MARKING ROPE produces maximum visibility at low, low cost. Blue Jay polyethylene rope is approx. equivalent in bulk to #8 cotton cord-but slow burning and more resistant to acid attack. In addition, it is 28% cheaper than cotton cord . . . less than 2c

polyethylane SAFETY MARKING ROPE

write for specifications and samples

D. JAY PRODUCTS, INC. 1 P.O. BOX 797, NEWARK 1, NEW JERSEY

Circle Item No. 68-Reader Service Card





in safety and related fields.

SAVE EYES! Leading industrial doctors advise immediate washing with plenty of running water as the best first aid treatment for any chemical in the eyes. Records prove that washing with water for ten minutes or more, close to the accident, is necessary to reduce or eliminate

eye camage.

Forehead operation leaves hands free to epen eyelids so water can be directed wherever chemicals might be lodged. Sanitary white baked ename! bow! is resistant to most fumes.

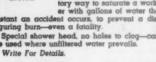
Over 500 industrial plant installations have been made to date.

een made to date.

Write For Details.

WASHING FOUNTAIN







expensive serums, biologicals, and other costly products.

Painful cuts, distinguring burns, loss of eyesight, or even a fatality, do result from corro-sive liquid splash and flying glass when unprotected bottles shotter.

Write For Details.

BENSON & ASSOCIATES.INC

P. O. Bex 7542, Dept. N.S., Chicage 80, III. Circle Item No. 69—Reader Service Card

Jan. 21-22, Milwaukee, Wis.

Eighteenth Annual Mid-Winter Occupational Safety Conference and Exposition. (Hotel Schroeder). R. W. Gillette, executive director, Wisconsin Council of Safety, Inc., 1 West Wilson St., Room 234, Madison, Wis.

Jan. 25-28, Philadelphia, Pa.

Plant Maintenance & Engineering Show. (Convention Hall). Clapp & Poliak, 341 Madison Ave., New York.

Feb. 16-17, San Francisco, Calif.

Tenth Annual California State vide Meeting of Governor's Industrial Safety Conference. (Fairmont Hotel). Michael Flagg, coordinator, Governor's Industrial Safety Conference, c/o Dept. of Industrial Relations, 965 Mission St. (Room 400), San Francisco, Calif.

Mar. 6-8, Jacksonville, Fla.

Southern Safety Conference and Exposition. (Robert Meyer & George Washington Hotels). W. L. Groth, executive director, P.O. Box 8927, Richmond 25, Va.

Mar. 9-10, Philadelphia, Pa.

Twenty-sixth Annual Regional Safety and Fire Conference and Exhibit. (Bellevue-Stratford Hotel). Harry H. Verdier, executive director, Safety Council, Chamber of Commerce of Greater Philadelphia, 121 S. Broad St., Philadelphia 7. Pa.

Mar. 15-16, Fort Wayne, Ind.

1960 Northeastern Indiana Safety Conference and Exhibit. Ivan A. Martin, manager, Safety Council, Chamber of Commerce of Fort Wayne, Ind.

Mar. 21-22, Boston, Mass.

Thirty-ninth Annual Massachusetts Safety Conference and Exhibit. (Hotel Statler Hilton). Bert Harmon, manager, Massachusetts Safety Council, 54 Devonshire Street, Boston 9, Mass.

Circle Item No. 70-Reader Service Card



Metal Standard

PREVENT COSTLY ACCIDENTS

A complete line of indoor or outdoor signs for every need. Fully Approved. Available in two gauges of steel. Write for illustrated catalog and prices.





MOTICE NO SMOKING ON THESE PREMISES

CAUTION

DANGER SOUND HORN BEFORE PROCEEDING

STANDARD SIGNS

INCORPORATED 3190 EAST 65th STREET CLEVELAND 27, OHIO

Circle Item No. 71-Reader Service Card National Safety News, December, 1959 Mar. 27-30, Dallas, Tex.

Annual Texas Safety Conference (Adolphus Hotel). J. O. Musick, general manager, Texas Safety Association, Inc., 830 Littlefield Bldg., Austin, Tex.

Mar. 29-30, Oakland, Calif.

Eighth Annual Northern California Safety Congress and Exhibits (Hotel Claremont). Clinton W. Dreyer, Eastbay Chapter, NSC, 1322 Webster St., Oakland 12, Calif.

April 5-7, Pittsburgh, Pa.

Thirty-fifth Annual Western Pennsylvania Safety Engineering Conference and Exhibit (Pittsburgh Hilton Hotel). Harry H. Brainerd, executive manager, Western Pennsylvania Safety Council, 305 First Federal Building, 600 Grant St., Pittsburgh 19, Pa.

April 11-13, Los Angeles, Calif.

Seventh Annual Western Safety Congress and Exhibits (Ambassador Hotel). Joseph M. Kaplan, manager, Greater Los Angeles Chapter-National Safety Council, 3388 W. 8th St., Los Angeles 5, Calif.

April 12-14, Detroit, Mich.

Michigan State Safety Conference. (Sheraton Cadillac Hotel). Ben Duguid, c/o All State Insurance Company, Box 5300-Seven Oaks Station, 16130 Northland Dr., Detroit 35, Mich.

April 19-21, Columbus, Ohio

Thirtieth All-Ohio Safety Congress and Exhibit (Neil House). Arthur W. Moon, Congress manager, Third Floor, 400 S. Front St., Columbus 15, Ohio.

April 27-28, Indianapolis, Ind.

Thirteenth Central Indiana Safety Conference and Exhibit (Claypool Hotel). Jack E. Gunnell, Indianapolis Chamber of Commerce Safety Council, 320 N. Meridian St., Indianapolis 11, Ind.

May 4-6, Winston-Salem, N. C.

Thirtieth Annual North Carolina Statewide Industrial Safety Conference (Robert E. Lee Hotel). H. S. Baucom, director of safety, North Carolina Industrial Commission, Raleigh, N. C.

May 5-7, Richmond, Va.

Twenty-sixth Annual Conference of the Virginia Safety Association. (Hotel John Marshall). Hiram M. Smith, Jr., Virginia Safety Associa-tion, 2501 Monument Ave., Richmond 20, Va.

Circle Item No. 72-Reader Service Card



get modern eye protection WITH JONES **FULL VISION** VISOR GOGGLES

Send for Illustrated Catalogue for Models Listed Below

CLEARVIEW	#1	Clear Lens
GLARESTOPPER	#IA	Light Pale Green
GLARESTOPPER	#2	Pale Green
GLARESTOPPER	#2A	Grey
GLARESTOPPER	#3	Dark Sage Green

Choice of 18 hole or Screened Port ventilation

ONE-PIECE SHATTERPROOF PLASTIC LENS (METHYL-METHACRYLATE)

CALL YOUR JOBBER OR WRITE TO:

JONES AND COMPANY

861 Broad St., Providence 7, N. I.



FOOT-TOE-LEG Protection by "Sankey" (left) Improved FOOT GUARD

(Style #200 illustrated)

FOOT GUARDS consist essentially of a metal shield to be worn over the shoe whenever the foot is in danger of being either crushed or cut. The metal shield is designed to furnish a maximum amount of protection

to the entire footnot merely to the toes alone, but also to the instep-against hazards from falling, rolling or flying objects, or from accidental tool blows.

TOE GUARD→

fills a demand for toe protection in occupations where hazards injurious to toes exist. They fit any shoe, afford maximum toe protection, and like the foot guards do not encase the toe to the discomfort of the worker. (Style #700 illustrated.)

Fibre Instep & Leg Guards

These guards provide protection for the instep, shin and knee. Light weight, obsolute freedom of leg motion, comfort and utmost protection are provided by the leg-contour shaped "Sankey" fibre guards. Guards are used when handling pulpwood, clearing brush, cane cutting, and numerous factory operations.

For more information write today

ELLWOOD SAFETY APPLIANCE CO. 225 SIXTH ST .- NSC ELLWOOD CITY, PA.



Circle Item No. 73-Reader Service Card



with a COMBINATION SCRUBBER-VAC!

Here's a timely answer to the need for reducing labor costs—a single cleaning unit that completely mechanizes scrubbing. A Combination Scrubber-Vac applies the cleanser, scrubs, flushes if required, and picks up (damp-dries the floor)—all in one operation! Maintenance men like the convenience of working with this single unit... the thoroughness with which it cleans... and the features that make the machine simple to operate. It's self-propelled, and has a positive clutch. There are no switches to set for fast or slow—slight pressure of the hand on clutch lever adjusts speed to desired rate. The powerful vac performs quietly.

Finnell's 213P Scrubber-Vac at left, an electric unit for heavy duty scrubbing of large-area floors, has a 26-inch brush spread. Cleans up to 8,750 sq. ft. per hour (and more in some cases), depending upon condition of the floors, congestion, et cetera. (The machine can be leased or purchased.) Finnell makes a full range of sizes, including battery-, gasoline-, and propane-powered as well as electric models. From this complete line, you can choose the size and model that's exactly right for your job (no need to over-buy or under-buy). It's also good to know that a Finnell Floor Specialist and Engineer is nearby to help train your maintenance operators in the proper use of the machine and to make periodic check-ups.

For demonstration, consultation, or literature, phone or write nearest Finnell Branch or Finnell System, Inc., 2212 East St., Elkhart, Ind. Branch Offices in all principal cities of the United States and Canada.





Originators of Power Scrubbing and Polishing Machines



BRANCHES IN ALL PRINCIPAL CITIES

Circle Item No. 74—Reader Service Card

New SAFETY EQUIPMENT

Product announcements in this section are reviewed for compliance with the advertising policy of the NATIONAL SAFETY NEWS. Inclusion should not, however, be construed as endorsement or approval by the National Safety Council.





Midget Size Safe Smoker

Model M is designed for any location where a

small-size individual-type smoker is needed.

It may be used in telephone booths, elevators, on backs of chairs, work tables, benches, or on machines in plants permitting "on-the-job" smoking.

The cannister is cast aluminum with a hinged lid suspending a coil spring that safely "parks" the unfinished smoke. Cleaning takes seconds. The canister is lifted off the bracket, and the lid flips back, for dumping.

This smoker is available in grey crinkle or bright polished deluxe finishes.

Standard Industrial Products Co., Box No. 794, 3527 Farmington Road, Peoria, III. (Item 301)



Portable Fire Pump

An aluminum fire pump now available weighs 50 lbs. and is self-priming and operable in any position without loss in prime. No check valves are required.

The pump handles water with suspended abrasives at a suction lift of 28 ft. while delivering 50 gpm at 100 psi. discharge pressure.

Equipped with a 2-cycle gasoline engine mounted on an aluminum skid, the unit can be carried by one man over rough terrain. This feature makes it useful for fire-fighting in areas inaccessible to vehicles. The design eliminates the need for coupling alignment by using a simple belt drive with guard.

Goodyear Pumps, Inc., 9 Rockefeller Plaza, New York 20, N. Y. (Item 302)

Ear Plugs

"PEP" ear defenders are self-molding, pliable, selfsealing, and create no fitting problems. No re-insertion is necessary with this soft, malleable protective ear insert.

The ear plug fits ear canals regardless of size or shape. Cohesive force seals the ear canal from traumatic noises and allows the worker or military crewman to wear ear protection comfortably for long periods.

Protecto Ear Plugs, Inc., 394 Grove St., Jersey City, N. J. (Item 303)



Air Sampler

A portable papertape air sampler for recording dust or gas concentrations automatically collects up to 900 dust or gas

samples by sucking air through a paper tape. The volume of air per sample is adjustable from 1.5 to 36 cu. ft.

For dust measurements, the darkening of the ½-in. diameter sampling spot is measured with a densitometer. If radioactive dusts are involved, the tape can be passed under a Geiger counter. For gas measurements there are treated papers that change color in the presence of gases, such as hydrogen sulfide, carbon monoxide, hydrogen cyanide, and phosgene.

The compact, portable sampler has been designed for field use. A volumetric piston vacuum pump with graphite rings that require no lubrication was developed for this sampler.

Linear air flow rate through the filter assures sensitivity, and the gas detection paper is capable of detecting and measuring low concentrations of harmful gases.

The device will be used in nuclear fields, industrial hygiene, process control and air pollution studies.

Gelman Instrument Co., P. O. Box 86, Chelsea, Mich. (Item 304)

For More Information—Circle Item Number on Reader Service Postcard

National Safety News, December, 1959

Hinge Pins

Acetate spectacles are now available with new Lok-Tite hinge pins, which eliminate loose temple screws.

These hinge pins are machined of a special alloy of spring steel, hardened to resist wear, and nickel-plated to prevent corrosion. They snap in, spread out, and lock themselves in. Yet, they can be removed or replaced without difficulty.

The slotted section permits the barrel of the pin to compress entering the hinge. When seated, the barrel expands to provide tension on the temple. The locking leg, clearing the bottom of the hinge, expands to engage the side walls and lock the pin in position.

Fendall Co., 4509 N. Lincoln Ave., Chicago 25, III. (Item 305)



Hand Lanterns

Model 281-GB stainless steel commando safety approved hand lamp (illustrated) is a dry-cell spotlight. Tested by the Bureau

of Mines, it throws a 1500-ft. beam, with 15,000 beam candlepower.

The focus can be adjusted to give a ½-mile beam or a broad diffused light. The lamp is available with a reflector. It uses a 6-volt double pack battery.

Another lamp is the rechargeable Wheat safety hand lamp, Model 271, approved by the U. S. Bureau of Mines and the U. S. Coast Guard, Class 1, Group D.

This light has an adjustable focus to give a broad diffused light as well as a penetrating light. The housing is aluminum.

The battery is made of Butalite. The unit requires no opening of terminals or changing of solution for charging, which is done by plugging directly from the charger into the light's receptacle.

Koehler Mfg. Co., Marlboro, Mass. (Item 306)

Safety Belt—Snap Assembly

Designed for reinforcing iron workers using a Tie Wire Reel for tying steel in place above ground level, this safety snap assembly fastens to the re-bar and frees both of the workman's hands for safe handling and placement of reinforcing steel bars.



The belt and snap assembly combination eliminates the need for costly scaffolding, and enables the workman to climb comfortably as he builds.

The safety belt is made of 2-in. steer harness leather, 1/4 in. thick. The tongue of the belt is lined with yellow

latigo leather to insure safety at the buckle-hole portion. The snap assembly has been drop-forged and tested, and has a safe working load of 1125 lbs. and a breaking strength of 4500 lbs. The hardware is cadmium plated. The belt and snap assembly are sold separately or as a complete unit.

Ideal Reel Co., 1424 Madison St., Paducah, Ky. (Item 307)



Back Pack Resuscitator

This back pack resuscitator is compact, lightweight, and contained in an aluminum case.

The unit is strapped on the back of a rescuer and makes it possible to

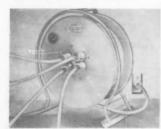
reach trapped or injured victims quickly, since the rescue worker has both hands free to crawl, climb ladders or remove debris.

The unit has dual outlets, permitting connection of a second resuscitator head and face mask, so the bearer can also supply oxygen to himself when working in contaminated areas. Complete with its two cylinders, it weighs less than 30 lbs.

The back pack may be used as a resuscitator, inhaling and exhaling for a victim until his breathing is restored; as an inhalator, continuously supplying oxygen; and as an aspirator, removing obstructions from the throat.

It is designed for industry, fire and police departments.

National Cylinder Gas Div., Chemetron Corp., 840 N. Michigan, Chicago, III. (Item 308)



Portable Cord Reel

Model No. 910 "Safety Yellow" Portable Cord Reel features four multipleservice "U"-blade-

type receptacles. This provides power outlets for varied applications at one time from one power source. It is suited for construction, industrial, municipal, public utility usage, or wherever portable power is needed.

This reel is said to eliminate cord damage, preventing it from twisting, tangling or breaking. It has a cord capacity of up to 375 ft., depending on cord size used.

Other features include a heavy steel rod frame, a balanced-load carrying handle, large re-wind knob, and no collector rings, brushes or slip-rings to wear out.

Daniel Woodhead Co., Dept. CR, 15 N. Jefferson St., Chicago 6, III. (Item 309)



Two-Hand Press Control

The AMBI-TRIP two-hand press control is an electro-magnetic two-hand push-button press control, designed to keep both hands of the operator safely away from the stroke of the

power press ram.

The control will energize the solenoid of a pressclutch only if both push buttons are simultaneously pressed. No stroke is possible if either one of the pushbuttons is tied or held down. The AMBI-TRIP is a compact, self-contained unit that can be set to operate a "single stroke" or continuous press.

It requires no external cams or switches and uses serviceable power relays. When the switch is off, the buttons will not trip the press. The safety-designed control is meant to increase production by decreasing the "fear hazard."

Durant Tool Co., 12 Thurbers Ave., Providence 5, R. I., (Item 310)

Lectronic Sentry

Positive protection is possible against ground faults and short circuits on direct-current-operated off-track mining machines and trailing cables.

The Lectronic Sentry consists of transmitting (left) and receiving (right) elements. Whenever the continuous monitor signal of the sender is interrupted, the receiver acts to remove power from the trouble-causing machine and/or cable.





The device prevents the energizing of equipment whenever a dangerous condition exists—whether this be a ground fault in the machine, a short circuit in the machine or its trailing cable, or a broken or open cable conductor. The sentry can distinguish between normal conditions of overload and potentially dangerous short circuits.

Designed to be fail-safe, the device has been accepted by the U. S. Bureau of Mines for use on permissible equipment. Because it provides this safety without use of a grounding conductor, the Lectronic Sentry allows the use of a less expensive two-conductor cable.

Joy Mfg. Co., Electrical Prod. Div. 1201 Macklind Ave., St. Louis, Mo. (Item 311)

Fibre-Glass Hard Hats

A highly-glossed finish is molded into these fibreglass hats and caps. Because the gloss is molded in, rather than added by polish, it is impervious to scratches, bumps and weather exposure. The high-gloss, finish of hats and caps provides greater resistance to dirt and stain.

The gloss improves hat visibility at a greater distance as a result of increased light reflection. The line of hats and caps, including aluminum, features a self-locking polyethylene suspension system, which tends to tighten to the hat or cap shell with impact, rather than loosen.

Boyer-Campbell Co., 6540 St. Antoine St., Detroit 2, Mich. (Item 312)



Jet Fuel Safety Pail

A spark-resistant safety pail is a one-piece molded rubber-fiber pail designed for aviation, marine and industrial use. Model NP-50-10 is for handling high-octane fuels.

The pails have no seams to split and resist the effects of solvents, battery acids, jet fuels, chemicals and caustics. The rubber-fiber material, blended with DuPont neoprene, produces a

durable pail.

The pail eliminates metal edges, dents, chipping and corrosion. It will withstand crushing, will not spark when scraped or hit, and can be cleaned with no difficulty. It is available in a 10-qt. size, and is graduated for measuring.

Fortex Industries, 44 Whitehall St., New York 4, N. Y. (Item 313)



Work Gloves

Silvertex-coated work gloves have built-in toughness for longer on-the-job life.

The coating insures maximum resistance to most industrial chemicals and reportedly has been proved superior to rubber and

reportedly has been proved superior to rubber and standard synthetics in this respect. Silvertex is also snag- and abrasion-resistant.

Its reflective quality helps to keep the worker's hands

Its reflective quality helps to keep the worker's hands cool and comfortable. The coating will not crack or peel, and remains pliable for the life of the gloves.

The gloves are available in eight styles, including knit wrist, band top, gauntlet and safety cuff. Knit-wrist and band-top styles are made with ventilated backs for coolness. The gauntlets are available in three sizes. All styles are of molded curved-finger design and wing-thumb construction.

The Surety Rubber Co., Carrollton, Ohio (Item 314)

For More Information—Circle Item Number on Reader Service Postcard



Emergency Oxygen Resuscitator

A portable emergency oxygen resuscitator that can be

attached to any type or size oxygen supply tank is called the Oxy-Quik. It weighs 2½ lbs. and includes a face mask, rebreathing bag to prevent oxygen waste, two oxygen cylinders, medical carrying case, and an automatic pressure-reducing regulator and gauge.

The pressure gauge permits accurate control of oxygen flow at approx. six liters a minute throughout the 12-minute capacity of the tank. Adaptors are available for refilling or use of the emergency unit directly from 1, 2, or 18-hour commercial cylinders.

Since the cylinders are made to government specifications, they will withstand pressures greater than those used with large commercial tanks. The portable oxygen inhalator can supply emergency oxygen in emergencies requiring immediate oxygen therapy.

General Scientific Equip. Co., Limekiln Pike & Williams Ave., Philadelphia 50, Pa. (Item 315)



Spark Arrestor

A spark arrestor for gas or diesel engines using a 4-in. exhaust stack is designed for large trucks, tractors, loaders and other equipment used in forests, fields, brush and hazardous areas where incandescent exhaust carbon can

start fires.

By trapping almost 100 per cent of the exhaust carbon from the engine at every throttle position and having provision for removal of the collected carbon, the 8CV40 arrestor exceeds test requirements of the U. S. Forest Service.

Erickson Prod. Co., 1960 Carroll Ave., San Francisco 24, Calif. (Item 316)



Car Puller

No. 14-H Car Puller brings power to one-man

car-spotting jobs, while affording safety to operating personnel.

There are no ropes to snub. The wire rope dead ends directly into the drum. A heavy-duty clutch operated by a hand wheel permits the drum to be released and turn freely in paying out rope. The clutch is engaged to start and pull a rated load.

Unlike other car pullers, the operator does not have to maintain tension or coil rope. The puller is enclosed, protecting the operator from moving parts. The unit is weather-tight and requires no special housing.

A fluid coupling motor to sustain shock load is optionally available.

Stephens-Adamson Mfg. Co., Ridgeway Ave., Aurora, III. (Item 317)



Hydraulic Drum Lift

The special clamp on this drum lift handles cylinders containing chlorine, butane or other dangerous materials. The clamp is interchangeable in the BM-3 unit, can accommodate cylinders

from 14½ to 15½ in. in diameter, and permits the cylinders to be raised and rotated for emptying. Clamps can be made for cylinders for other diameters.

Sterling Fleischman Co., P. O. Box 94, Broomall, Pa. (Item 318)



Lifting Devices

The "Grip Lifter" line of belowthe-hook load-gripping devices are useful in hoisting. The line contains plate-lifting clamps, tongs, hooks and grips in a range of types and sizes.

Five types of plate lifting clamps are offered in sizes from 1,000

through 40,000-lb capacity. Three clamps are vertical types with a cam gripping action, choice of chain or shackle connection and safety lock. A fourth clamp is a horizontal type with cam gripping action. The fifth is a set screw type, suitable for vertical and horizontal use. These clamps are built for service and have machined gripping surfaces that insure positive safe grips.

Tongs are available in six types: crate, pipe, rail, beam, timber, and barrel or drum tongs.

Hooks available include two types of box hooks and a trip hook. One box hook has jointed arms to align the face plate with the side of box or crate, and has replaceable dog points.

In the grip category are devices for safe, efficient handling of barrels, drums, kegs and boxes.

Manning, Maxwell & Moore, Inc., Muskegon, Mich. (Item 319)



Automatic Fire Alarm

A heat-sensitive, self-pressurized fire alarm has a visual glass-eye monitor that indicates liquid level and requires no maintenance or dismount-

ing of the system for liquid-level testing. It is said to be the only alarm approved by Underwriters' Laboratories for 1500 ft. of tubing in a single one-horn system for one or an unlimited number of areas where early, positive fire warning is necessary.

The alarm is U/L-approved for use with two horns in one system. It can be made as a single station horn mounted home-type unit that can be easily hung from the ceiling. The unit contains no moving parts, batteries or wires, and sounds a blast of noise lasting for 15 to 20 minutes that can be heard for 34 of a mile.

The alarms are available in fixed temperatures of 136F and 174F. The 136F units are placed where the ceiling temperatures do not exceed 100F. The 174F units are placed where the temperatures do not exceed 150F. When the temperature reaches the unit's operating point, pressure is released to activate the signal horn. Only the unit in the danger area operates.

The alarm is placed at ceiling heights, where desired, and as many units as required are inter-connected with ½-in. aluminum tubing.

They are U/L-approved for 400 sq. ft. spacing, and in large installations several individual systems may be required to pinpoint fire areas. Singal horns may be located inside the building, outside, or both on the same system. The alarm contains 20 oz. of DuPont freon, is 9-1/4 in. high by 3 in. in diameter, and is suited for factories, warehouses, and other buildings.

Standard Fire Alarm & Signal, Inc., 100 Old York Rd., Jenkintown, Pa. (Item 320)



Automatic Suspension Scale

Model P is an accurate automatic suspension scale. It is calibrated with certified test weights to an accuracy of 1/10 of 1 per cent, and is sealed by the Bureau of

Weights and Measures prior to shipment.

Model P has a legible, 16-in. diameter dial and is available in capacities ranging from 0-250 to 0-10,000 lbs. Principle of operation is based on compound levers. The mechanism is dampened against vibration or flutter, and the safety factor is 5-1 in capacities up to and including 5000 lbs., and better than 3-1 in the 7500 and 10,000-lb. ranges.

A reset or tare adjustment knob is provided on the Model, so weight of slings, pallets or chains may be canceled out.

The ball-bearing swivel hook revolves freely under maximum load a full 360 degrees in either direction, and will are 27 degrees to accommodate material pick-up at an angle.

Scales have a net weight of 56 lbs. and can be carried by the operator. The scales are not affected by extremes of foundry-room heat or the sub-zero of outside storage yards. Suspended from a cross-bar on the fork they may be used with fork lift trucks.

W. C. Dillon & Co., Inc., 14620 Keswick St., Van Nuys, Calif. (Item 321)



Plastic Barrier Rope

A high-tensile, polyethylene barrier rope in yellow and black combines visibility with

strength. It can rope off restricted areas and work projects inside and outside the plant, around excavations and building operations, road construction, and can guide foot and emergency traffic.

Standard size is 5/16-in. diameter, with two strands of yellow, and one strand of black. It is light and flexible, yields 46 to 50 ft. to the pound, and has an approximate 1500-lb. test.

The colors are bright and fast, and do not absorb dirt. It offers advantages for barrier use with added advantages around chemicals and where high dielectric properties are required. It is durable and can be used on water, floating almost indefinitely.

Albert W. Pendergast Safety Equip. Co., Tulip & Longshore Sts., Philadelphia 35, Pa. (Item 332)



Floor Surfacing Compound

Chemi-Top Safety Floor is a non-skid, corrosion-resistant resurfacing compound.

Safety Floor is chemically inert, trowels to a tough

corrosion-resistant topping for areas covered with grease, oil, fats, acids, alkalis, and other hazardous liquids.

The product contains a sharp aggregate that penetrates oil films and makes a firm, non-skid contact with workers' shoes. It is for ramps, dockboards, stair treads, catwalks, and other danger areas.

According to the manufacturer, Safety Floor resists the corrosive effects of oils and greases indefinitely—and does not soften or peel off. It will not dust under floor traffic or absorb liquids or bacteria.

ges. The Garland Co., Cleveland 5, Ohio (Item 323)
For More Information—Circle Item Number on Reader Service Postcard

National Safety News, December, 1959



D. Williams

The Fibre-Metal Products Co.

David Williams has joined the Sales Department at Fibre-Metal Pacific, Inc., 7332 South Garfield Ave., Bell Gardens, Calif. He will cover the San Francisco Bay area, contacting distributors of safety and welding equipment in a wholesale capacity.

He has been with Fibre-Metal since September and formerly was with Liquid Carbonic Company. He has training in industrial and medical accounts in relation to welding and safety equipment.

The Colorado Fuel and Iron Corp.

Kingdon B. Dietz has been appointed New York district sales manager. He has been assistant sales manager of the New York District since January 1958 and has been with the company since 1954 as a district salesman. Formerly he was with Pan-American Airways.



E. L. Babcock

Gro-Cord Rubber Co.

E. L. Babcock has been appointed sales manager of this manufacturer of safety soles. He has been with the company since 1946 and formerly was district sales manager in the Mid-Atlantic territory. Most recently, he was sales promotion manager.

Wyandotte Chemicals Corp.

The J. B. Ford Division has added representatives to several of its districts across the country. Representing the specialized cleaning products are Ralph A. Helderman, LeRoy B. McMullen and Fred E. Wilson of the Atlantic District; Robert B. Montgomery, Cincinnati; Claude T. McIntosh, Jr., Dallas; Joseph Allred, Los Angeles; John C. Anderson, New York; and Joseph J. Watson, Philadelphia.

Bar-Ray Products, Inc.

American Medical Sales, Inc., 1116 North Detroit St., Los Angeles, has been appointed as warehouse distributor for this manufacturer of X-ray accessories and radiation protective equipment.

The firm will be represented by Marvin Stevens in Arizona, California, Idaho, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming and the El Paso area.

Worklon, Inc.

Carl Robinson has been appointed general manager of this manufacturer of lint-free, acid-resistant uniforms for industrial purposes. Robinson has been with the company since it was formed in 1951.



W. R. Orr, Jr.

Boyer Campbell Co.

William R. Orr, Jr., has been appointed safety sales representative for the company's Western Michigan territory. He will be based in Grand Rapids. Boyer Campbell is a division of the White Sewing Machine Corporation and is a national distributor of safety products and equipment for industry.

Union Wire Rope Corp.

The National Supply Co. will sell all wire rope products made by this Kansas City organization through the oil field sales division.

These products will be available through National's 112 oil field stores and its 24 additional sales offices.

The products will include Tuffy rotary lines, cable tool drilling and casing lines, winch and dozer lines, rod and tubing lines, sand and pump lines, rod hanger lines, and slings.

Union Wire Rope and the National Supply Company are subsidiaries of Armco Steel Corp.



J. Ely

Universal Safety Equipment Co.

John Ely has joined the Milwaukee sales force of this distributor of safety equipment. Previously with Mine Safety Appliances Company and Safety, Inc., Ely has had 23 years of experience in the safety equipment supply field. He will service part of the Mil-

waukee and out-state area.

The Landsverk Electrometer Co.

Charles D. Gould has been appointed chief engineer of this firm. He will be responsible for the engineering program of the Miller Metal Products Division in Burbank, Calif., and the contract division at the Garfield plant, as well as the company's standard products in the commercial division. The company manufactures radiation health protection instruments.



WARNING SIGNALS



POWERFUL **REVOLVING**

FLASHING LITES

SIRFNS ALL SIZES & **TYPES**



FOR INDUSTRIAL USE & **EMERGENCY VEHICLES**

Write for free Bulletin No. 70

214 WILLIAM SPREET . NEW YORK JE, N

HARMFUL Effects of NOISE To The EAR DRUMS ELIMINATED by Lee Sonie EAR-VALVS



A FREE 30 Second Demonstration will PROVE this BEYOND QUESTION We GUARANTEE THAT! Remember they are NOT EAR PLUGS! They are

scientifically developed sound controls that protect the ear drums without interfering with normal conversation or sound. We'll gladly send you a pair for actual demonstra-tion. THEN you will find out why they are recommended and used wherever NOISE is a HAZARD and a deterrent to normal produc-tion. Send for your demonstration pair TODAY on company letterhead. No obligation to purchase.

SIGMA ENGINEERING COMPANY 1491 Vine St., Dept. F3, Les Angeles 28, Calif. Circle Item No. 76—Reader Service Card

National Safety News, December, 1959

Industrial Chairmen

-From page 54

tor of Packinghouse Practices & Research. American Meat Institute, Chicago.

General Chairman: A. G. Whisman, General Supervisor of Safety and Sanitation, Gary Steel Works, U.S. Steel Corp., Gary,

Vice-Chairman: W. R. Gilliland, Assistant Safety Director, Aluminum Company of America, Pittsburgh, Pa.

Mining:

General Chairman: J. M. Smith, Asbestos Corp. Ltd., Thetford Mines, Quebec, Can-

Vice-Chairman: Al. Kolu, Pickands Mather & Co., Duluth, Minn.

Occupational Health Nursing:

General Chairman: Miss Dorothy Armstrong, R.N., The Peoples Gas Light & Coke Co., Chicago.

Vice-Chairman: Miss Clare B. Schwartz, R.N., Employers Mutuals of Wausau, River Forest, Ill.

Petroleum:

General Chairman: G. B. Black, Sun Oil

Co., Philadelphia, Pa.

Vice-Chairman: R. D. Eberly, Standard Oil Co. (Indiana), Chicago

Power Press and Forging:

General Chairman: C. D. Brainerd, Safety Director, Olds Forge Plant, Oldsmobile Div., General Motors Corp., Lansing, Mich. Vice-Chairman: Dan W. Stitt, Assistant General Manager, Industrial Relations, Continental Can Co., New York, N.Y.

Printing and Publishing:

General Chairman: D. H. Grothaus, Safety Director, McCall Corp., Dayton, Ohio. Vice-Chairman: G. S. Mansfield, Safety and Employee Benefits Director, Western Printing and Lithographing Co., Pough-keepsie, N.Y.

Public Employee:

General Chairman: M. Van Mechelen, Safety Engineer, Washington State Department of Highways, Olympia, Wash.

Vice-Chairman: H. P. Goodin, Safety Director, City of Minneapolis, Minneapolis, Minn.

Public Utilities:

General Chairman: R. L. Lowe, Plant Training and Safety Supervisor, Northwest-ern Bell Telephone Co., Omaha, Neb.

Vice-Chairman: R. E. McEldowney, Jr., Safety Director, United Fuel Gas Co., Charleston, W. Va.

Pulp and Paper:

General Chairman: G. R. Merriman, Coordinator of Safety, International Paper Co., Southern Kraft Div., Mobile, Ala.

Vice-Chairman: D. V. Hill, Safety Director, The Mead Corp., Kingsport Div., Kingsport, Tenn.

Railroad:

General Chairman: F. C. Lewis, The Pullman Co., Chicago.

Vice-Chairman: G. C. Stromsoe, Atlantic

Coast Line Railroad Co., Wilmington, N.C.

Circle Item No. 77-Reader Service Card





KEY-BAK is worn on the belt. Pocket-watch size reel, in highly-polished chrome finish. Swedish clock-spring reels in 24" long STAINLESS STEEL chain. NO DANGEROUS DANGLING CHAINS TO CATCH ON MACHINERY and CAUSE ACCIDENTS.

SAF-T-CHUCK REY-BAK MODEL Attach SAF-T-CHUCK KEY-BAK to all drill presses. Chuck key is always handy: SAF-T-CHUCK KEY springs out when released. It can NEVER, NEVER, NEVER be thrown from the whirling Chuck Model 75K — \$4.45 complete with #3 Key; Key available in ten sizes.

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UMMIS MEG. COMPANY

CIL COMPANY

Circle Item No. 78—Reader Service Card



\$10.95 ea. \$9.95 ea.

Immediate Delivery

F.O.B.

Write for Illustrated catalog.

CALUMET STEEL CASTINGS CORP.



GETS-A-LITE GUARD and GUIDE Quickly and Easily Installed by Anyone-No Tools Needed!

- Simply slip GETS-A-LITE GUARD AND GUIDE over the fixture, as illustrated.
- Made of indestructible apring steel wire. Nothing to break, get out of order or replace. Will last indefinitely.
- Once installed, GETS-A-LITE GUARD AND GUIDE is NEVER removed.
- Nothing to unlock, fuse with or lock, when changing lamps.
- GETS-A-LITE GUARD AND GUIDE actually steers lamp into socket, enabling maintenance man to change lamp in 10 seconds:
- Available for 40 watt and 100 watt fluorescent lamps.

GETS-A-LITE CO.-Dept. NSN-129 3865 N. Milwaukee Ave., Chicago 41, Ill.

Circle Item No. 80-Reader Service Card



Robert L. Moore, superintendent of engineers, Lumbermens Mutual Casualty Co., general chairman, Construction Section, shows his replica of the gavel used by the section since its founding in 1918. It was presented at the Congress.

Rubber:

General Chairman: W. J. Dooling, B. Goodrich Footwear and Flooring Co., Division of B. F. Goodrich Co., Watertown, Mass.

Vice-Chairman: F. W. Sands, U.S. Rubber Co., New York, N.Y.

Safety Education Supervisors:

General Chairman: Lewis Clark, Supervisor of Safety, Lansing Public Schools, Lansing, Mich.

Vice-Chairman: Dalibor Kralovec, Assistant Supervisor in Charge of Safety, Division of Physical and Health Education, Philadelphia Public Schools, Philadelphia, Pa.

General Chairman: F. N. Petty, Director, Safety & Benefits, Dan River Mills, Inc., Danville, Va.

Vice-Chairman: A. E. Connelly, Safety Supervisor, E. I. duPont de Nemours & Co., Inc., Martinsville, Va.

Trades and Services:

General Chairman: A. N. Sommer, Owner-Manager, The Sommer Restaurants, Chi-

Vice-Chairman: Harry Gustafson, Safety Director, The Drake Hotel, Chicago.

Transit:

General Chairman: J. G. Butler, Director of Personnel and Labor Relations, D.C.
Transit System, Inc., Washington, D.C.
Vice-Chairman: Paul Fanning, Director
of San Francisco Public Utilities Commis-

sion, San Francisco, Calif.

Wood Products:

General Chairman: E. H. Reeves, General

Manager, Lumbermen's Safety Association, Toronto, Ontario, Canada. Vice-Chairman: S. F. Reinwart, Consoli-dated Underwriters, T. H. Mastin & Co., St. Louis, Mo.

Circle Item No. 81-Reader Service Card



when seconds count ...

AMBU*

Emergency Kit restores the breath of life

For respiratory emergencies, the AMBU hand operated resuscitator and foot operated suction pump-

- always ready for instant use
- efficient, simple to operate
- ono time-wasting set-up
- o compact, portable
- no electricity or oxygen requirea

Write for additional information...or telephone collect to OSborne 5-5200 (Hatboro, Pa.)



Hatboro, Pa.

*Trademark



Circle Item No. 82-Reader Service Card National Safety News, December, 1959

TRADE PUBLICATIONS

These trade publications will keep you up-to-the-minute on new developments in safety equipment and health products. All catalogs are free, and will be sent without obligation. Just circle publication number on the Reader Service Postcard.



How to Select a Gas Mask

"How to Select a Gas Mask" is a new circular giving information never before published. Acme Protection Equipment Co. says that after reading and following the tips in this circular, your maintneance and use of gas masks will be more efficient. The circular is free. Acme Protection Equipment Co., 1201 Kalamazoo St., South Haven, Mich.

For more details circle No. 400 on enclosed return postal card.

Practical Floor and Carpet Care

"How To Cut Overhead Underfoot," a complete illustrated floor care manual, is now being offered by Advance Floor Machine Co., Spring Park, Minn. Stepby-step instructions for cleaning and maintaining all popular types of hard and resilient floors, along with instructions for carpet shampooing, are featured in the manual. Also contains useful suggestions for selecting the proper equipment, cleaners, and waxes, and also tips on how to treat common floor problems. Detailed instructions for using work planning schedules and setting up proper job time requirements are also included in the manual.

For more details circle No. 401 on enclosed return postal card.

Sling Chain Safety Kit

This six-part kit, recently issued by The McKay Co., 1005 Liberty Ave., Pittsburgh 22, Pa., is probably the most complete guide on sling chain safety ever published. It provides answers to almost every conceivable question regarding the care, use, and inspection of sling chains. For convenient reference, the kit is comprised of five folders, each dealing with a different aspect of chain safety. Folders are pocketed in a sturdy 4 x 9 folder. A 12-page booklet, "Vital Links to Safety," is virtually a ready-made chain safety a different aspect of chain safety. Folders are pocketed in a sturdy 4 x 9 folder. A 12-page booklet, "Vital Links to Safety," is virtually a ready-made chain safety program. It crystallizes, simply and graphically, the fundamental safety procautions that need to be followed to insure the maximum in chain safety. Covered are such subjects as step-by-step inspection procedures, safety precautions, safety terms, working load limits, proper care and use of chain, maintenance procedures, and many other chain safety subjects. For those who wish to make up their own assemblies or maintain their own chains, a six-page folder covers the wide assortment of McK-Alloy attachments available for sling chains. Another six-page folder spells out "reasons why" McK-Alloy chain, whose primary purpose is for hazardous overhead lifting, is also often a more economical and safer medium for other application areas. Up-todate specifications on McK-Alloy sling chains, in sizes from ½" thru 2" diameter, are covered in an eight-page folder. Detailed specifications are given for the standard single, double, triple and quadruple branch slings, as well as other types. Safe working load limits are charted for each assembly. Because the nexative approach sometimes works better than a positive one, a six-page folder interestingly describes both "If You Do Care" and "If You Don't Care" approaches to chain safety.

For more details circle No. 402
on enclosed return postel cord.

Safety Awards and Plaques

The House of Williams, 37 South Wabash Ave., Chicago 3, Illinois, have made available a brochure intended as an idea starter for promoting awards. In it you can see how other organizations have used awards and plaques as incentives to spark a safety award campaign or an advertising campaign, to move goods, or to create good will.

Por more details circle No. 403 on enclosed return postal card.

Ampco Welding News

Ampco Welding News

X 7,500-ton press ram overlaid with
5,000 feet of aluminum bronze filler metal
is described in the third quarter 1959 issue
of the Ampco Welding News.

The publication, issued quarterly by
Ampco Metal, Inc., 1745 South 38th St.,
Milwaukee 46, Wis., producer of special
copper-base alloys, is directed to users
and potential users of bronze welding
electrodes. Also included in this issue of
the publication are articles describing the
overlaying of automotive trim dies, repairing of cast-iron gears and fabrication of metal kitchen furniture. The advantages and applications of Ampco's
new line of extruded rectangles are also
discussed.

For more details circle No. 404 on enclosed return postal card.

Safety Hats and Caps

Bulletin No. 18 describes a completely new line of hats and caps by Flood, and available in fiberglass, aluminum, or plastic-electrical shells. The new Flood safety hat and cap line features a unique plastic-zippered polyethylene suspension which is easily removed for cleaning and sterilization. An important feature of the suspension system in the new Flood line is that it tightens to the hat shell on impact, providing extraordinary safety. The bulletin contains illustrations of all hat and cap models, and includes a full list of hat and cap accessories by part number. Flood Safety Products Co., 3035-37 W. Lake St., Chicago 12.

For more details circle No. 405

For more details circle No. 405 on enclosed return postal card.

"How to Handle Baling Wire"

Steel baling wire, often a source of ugly industrial accidents, need no longer be the hazardous operation it has been. So states a new safety booklet published So states a new safety booklet published by a cellulose and wood pulp producer Rayonier, Inc., 161 East 42nd St., New York 17. The booklet, profusely illustrated with on-the-job photographs, shows the easy, step-by-step way to prevent accidents and their resultant costs in the handling of wire-baled packagings. Included with the booklet is a smaller handbook on basic safety tips for cutting wire on pulp bales. Also clearly illustrated, it is primarily designed for workers in shipping, receiving, and manufacturing departments.

For more details circle No. 406 on enclosed return postal card.

Paper Cutter

The Douglas Homs Co., 326 Jackson St., San Francisco 11, Calif., offers its new Model 14 table-top guilotine paper cutter for use in business, schools, print shops, letter shops, and all other activities where paper is used. It is stated that the unit incorporates features of guillotine cutters costing much more, such as a pull-out safety device, heavy-duty paper press, full-length side guide, full-width adjustable back guide, ruled table and two ruled metal inserts for quickly inserting paper to desired length for cutting. The Model 14 has a capacity of approximately 380 sheets with widths up to 14½ inches.

For more details circle No. 407 on enclosed return postal card.

Adjustable Dockboards

Adjustable Dockboards

The Kelley Co., Milwaukee 9, Wis., manufacturers of Hi-Lo Adjustable Dockboards, is offering a new informative kit containing facts, figures, and equipment data of interest and value to anyone planning a new or improved truck loading dock. Featured in the kit is an eightpage booklet entitled "Loading Docks and Yards." Compiled from information published by the A. T. A., Truck Trailer Mig. Assn., and the S. A. E., the booklet includes minimum design standards and efficiency ideas that will speed the inand-out movement of trucks. The new Hi-Lo Adjust-A-Lip Dockboard is also featured. Several applications of this new unit in, on top of, and in front of dock facilities are illustrated.

For more defoils circle No. 408

For more details circle No. on enclosed return postal co

Sound Isolation Rooms

Valuable information on the construction and use of sound isolation rooms is available from Industries Acoustics Co., Inc., 341 Jackson Ave., New York 54, N. Y. Industrial Acoustics' sound isolation rooms are used for many applications throughout industry. These applications include product research and development, quality control and product testing, housing for noisy production shipment, and audiometric examination and medical research rooms.

For more details circle No. 407

For more details circle No. 409 on enclosed return postal card.

Scaffolds

A 16-page brochure describes Baker portable steel scaffolds. It illustrates the versatility of the single Baker scaffold unit, as well as the numerous setups possible with multiple Baker scaffold units to provide higher, wider, or longer work platform areas. The scaffolds assemble easily and rapidly to form a safe, rigid work platform, which is adjustable in 3-inch increments from a minimum of 22 inches to a maximum of 5 ft. 8 in. (plus caster heights). Platform heights may be

changed quickly and easily oy manually releasing the special spring-loaded catch which provides automatic locking. This exclusive feature of the Baker scaffold resists vibration and bumps. Baker-Roos, Inc., Dept. SL-31, 602 W. McCarty St., Indianapolis 6, Ind.

For more details circle No. 410 on enclosed return postal card.

Ultrascopic Safety Glasses

A complete, new Catalog No. S-8582, covering its entire Ultrascopic safety glasses line is now available from American Optical Co., Safety Products Div., Southbridge, Mass. Containing all data on the Safemaster, Mahogany, pink crystal, and metal frames.

For more details circle No. 411 on enclosed return postal card.

First Ald Kits

The Washburn Laboratories, Inc., 500 Robert St., St. Paul 1, Minn., have made available a catalog sheet that illustrates their new first-aid kits, which are available imprinted with a customer's message on the front or back of the kit. These kits make an attractive giveaway for industrial plants, insurance companies, or sportmen. This little kit will provide immediate treatment for minor cuts, burns, and insect bites. These kits come in an easy-to-carry pocket-pack.

For more details circle No. 412

For more details circle No. 412 on enclosed return postal card.

Rainwear and Protective Clothing

Bulletin No. 1312-2 illustrates and describes rainwear and protective clothing, designed for industrial, utility, and special applications. The brochure provides details and illustrations on a wide variety of suits, coats, pants, aprons, nats, and other accessories. Basic materials offered are heavy-weight neoprene latex for latex for rugged industrial use, and medium-weight neoprene latex for use where climate or other factors demand lighter weight clothing. Special features of the M-S-A apparel are outlined in the bulletin, including a smooth-finish coating, nyion buttons and suspender clasps, and permanent stencling for identification. Mine Safety Appliances Co., 201 N. Braddock Ave., Pittsburgh 8, Pa.

For more details circle No. 413 on enclosed return postal card.

Hygrometric Catalog

Hygrometric Catalog

The American Instrument Co., Silver Spring, Md., have made available a new Aminco Hygrometer Catalog No. 680. The new 69-page, two-color publication contains descriptions and illustrations of hundreds of pieces of moisture-detection, control, and alarm equipment. Complete systems are described, as well as individual components whereby specialized systems can be built. Included in the catalog is equipment for the measurement and/or recording of relative humidity, dew point, and moisture content. Individual instruments include: Indicators, industrial and laboratory controllers, records, and nondestructive package inspection equipment.

For more details circle No. 414

For more details circle No. 414 on enclosed return postal card.

Acetate Cement

A new acetate cement with a flash point well above 100° F to reduce mass production hazards in the bonding of cellulose acetate or butyrate sections, has been announced by Schwartz Chemical Co., Inc., 50-51 Second St., Long Island City I. N. Y. The new acetate cement is water white, developed particularly to eliminate the hazards of acetone in the bonding of acetate to acetate sections or butyrate sections. It will not thicken when applied from open containers or felt pads, but its viscosity can be increased by the addition of cellulose acetate shavings for special applications. Relatively high flash point and low volatility eliminate need for red labels or special fire department permits, and tend to minimize worker discomfort in confined areas.

For more defails circle No. 415 on enclosed return postol card.

Safe-T-Grip File Handles

Made of light, durable, cast aluminum a two sizes, Safe-T-Grip file handles fit my size or make of mechanics' files.

Easily inserted or removed with a gentle tap, these handy handles convert the ordinary file into a convenient cutting tool that does the job faster, better and with less effort. Safe-T-Grip handles are vented for working comfort. Used either for a one- or two-hand operation, they position the file to give more uniform working pressure and prevent uneven work. Bulletin gives full details. M-M-A, Inc., Lancaster, Pa.

For more details circle No. 416 on enclosed return postal card.

Longer Concrete Floor Life

How Masterplate "iron clad" concrete floors last six times longer than ordinary concrete floors is explained in this 24-page Master Builders Co. Bulletin No. MP-4d. Discussed are the major features sought in the design of any industrial floor subject to heavy use, i. e., wear and corrosion resistance; economy, spark resistance, static-dissipation, color, and non-slip, non-dusting, easy-to-clean surfaces. Complete photos, diagrams and detailed explanations cover method of installation and actual facilities where Masterplate concrete floors are now in service. The Master Builders Co., Cleveland 3, Ohio.

For more details circle No. 417 on enclosed return postal card.

Protective Eyewear Products

The T/O-7 line of metal and acetate safety frames for protective and corrective lenses is illustrated and described in a new brochure available from Titmus Optical Co., Inc., Petersburg, Va. The featured frames combine rugged utility with trim lines. Their neat, inconspicuous appearance increases worker acceptance of safety glasses. The brochure also features Titmus plano safety lenses, available in all sizes, in clear or contra-glare absorptive shades. in all sizes, in sorptive shades.

For more details circle No. 418 on enclosed return postal card.

Fire-Resistant Wrap

"Pyro-Kure," a new packaging material and vapor barrier with fire-retardant properties, has been announced by American Sisalkraft Corp., 55 Starkey, Attleboro, Mass. The product is composed of foil and kraft paper bonded together with a flame-extinguishing adhesive and reinforced with strong fiberglass strands. When the temperature surrounding this material reaches the combustion stage, gases or vapors are released, which tend to smother the flame.

For more details circle No. 419 on enclosed return postal card.

Water-Rinsable Paint Remover

Development of a brush-on paint remover that remains wet and workable for a day or longer, and thus strips deeper and more completely, has been announced by Turco Products, Inc., 6135 S. Central Ave., Los Angeles. A single coating is sufficient in most cases to completely remove up to ten layers of unwanted paint. Nonflammable, 4377 B, according to manufacturer, is safe and non-corrosive on all common metals. It removes paint, varnish, baked varnish, lacquer, zinc, chromate primer, baked enamel, automobile synthetic enamel, and air-dry synthetic enamel.

For more details circle No. 420 on enclosed return postal card.

Safety Valves for Hazardous Liquids

A safety shutoff valve from O. P. W. Jordan finds wide industrial application with hazardous liquid lines of all types. It shuts off automatically if a break in the pipeline occurs, preventing loss of product and hazardous conditions. In case of fire, a fusible link melts to close the valve. Free bulletin illustrates valve, describes features, applications, and engineering data. O. P. W. Jordan Corp., 6013 Wiehe Road, Cincinnati 13, Ohio.

For more details circle No. 421 on enclosed return postal card.

Adhesive Bonding of Aluminum

Adhesive bonding of aluminum is the subject of a new booklet available from Reynolds Metals Co., Dept. PRD-21, Richmond 16, Va. According to R. W. Flournoy, Chief Chemical Engineer in the Rey-

nolds Industrial Service Dept., recent advances in adhesive materials have made this method of joining very advantageous for aluminum in certain applications. These applications include sandwich panels with honeycomb aluminum cores, beaded aluminum panels for supersonic aircraft fuselages, and aluminum evaporators and cooling coils for home freezers and refrigerators. Introductory material traces the development of adhesives and describes their advantages in modern applications. Subsequent chapters deal with design of joints, the various types of adhesives for aluminum, and processing of adhesive joints.

Included is a section of typical applications which lists advantages and disadvantages to be considered when use of adhesives is contemplated.

For more details circle No. 422

For more details circle No. 422 on enclosed return postal card.

Radioactive Compounds

Nuclear-Chicago Corp., 359 E. Howard Ave., at Nuclear Drives, Des Plaines, Ill., has announced publication of a new catalog-price list devoted entirely to radio-active compounds, radiation sources, radio-activity standards, and radiation source kits. Included in the catalog are prices and information on hundreds of carbon-14, surfur-35, and phosphorus-32 labeled compounds. Thirty-eight new tritium (radioactive hydrogen) compounds, available for the first time from Nuclear-Chicago, are also listed. The brochure is called "Schedule E."

For more details circle No. 423 on enclosed return postal card

Safety Trolley System

"Make Your Plant Safe . . with the Penrose Safety Trolley System" is the title of a new booklet available from Northbrook Products, Inc., Industrial Division, 230 E. Ohio St., Chicago II. The new "Penrose" trolley system, which completely covers all live parts and eliminates the hazards of exposed crane trolley wires, is described, Said to be quickly adaptable to any existing or new installation, the Penrose system requires no plant shutdown or the use of special labor. Installation is accomplished by clipping the exclusive neoprene duct to the wire. The entire trolley wire is covered by the flexible neoprene duct with a self-closing slot through which the trolley shoe passes. The current is carried by insulated jumpers. The contact shoe is supported on an insulator on the end of the arms, and guarded by a neoprene cover so that no live parts are exposed. Sections may be installed without service interruption.

For more details circle No. 424 on enclosed return postal card.

Safety Lighting

"Hazard Warning and Portable Lighting," a new 20-page catalog just issued by the R. E. Dietz Co., 225 Wilkinson St., Syracuse I, N. Y., describes the Dietz line of flashers, lanterns, and torches, Includes new price sheet, individual product specifications, plus usage and maintenance tips for lanterns and torches. For more details circle No. 425 on enclosed return postal card.

Manual Press Controls

Catalog No. 65b has been completely revised and expanded to 16 pages to give more application data and helpful ordering information. It tells how Micro Switch Trip Control can be easily applied to manually operated stamping machines, air presses, riveters, press brakes, shears, welders, and paper cutters to make them safer and more productive. Detailed descriptions and photographs of 15 different installations are included. It is clearly explained how Micro Switch Trip Control can't be cheated, how it safeguards operators and die-setters, and how it can increase your production of primary and secondary press operations. Micro Switch Div., Minneapolis-Honeywell Regulator Co., Freeport, III.

For more details circle No. 426 on enclosed return postal card.

Foundry Exhaust Hood

Bulletin No. 270-E2A, Volume 2, Manual for Exhaust Hood Designs for the Foundry Industry, has been released by American Air Filter Co., Inc., 215 Central Ave.,

Louisville 8, Ky. The bulletin contains 46 actual installation photographs, which illustrate the use of exhaust hoods in foundry shakeouts, melting furnaces, grinding and abrasive sawing, swing frame grinding, abrasive cleaning and tumbling, sand handling and conditioning. Also included are product application illustrations and ventilation data for shakeout hoods and sand handling and conditioning hoods. Descriptive information about a typical foundry dust control system and an explanation of the operation of different dust control equipment in foundries also is included.

For more details circle No. 427 on enclosed return postal card.

Stretchers

Catalog illustrates a complete line of cots and stretchers to help plants meet every first aid and medical emergency. Units facilitate the painless transfer of injured patients. Multi-level stretchers are designed to raise and lower patients without the use of complicated springs or levers. The units lock automatically for added safety. Ferno Mig. Co., 6th & Pine Sts., Greenfield, Ohio.

For more defails circle No. 428 on enclosed return postal card.

Waterless Hand Cleaner

A waterless hand cleaner with a new slip-on dispenser is the subject of literature from Mac's Super Gloss Co., Inc., Los Angeles 42, Cr.if. The hand cleaner may be used with or without water. It removes grease, grime, inks, and paints thoroughly.

For more details circle No. 429 on enclosed return postal card.

Air-Borne Contaminants

Over 100 threats to a workman's health can be put down to air-borne contaminants in metal treatment and cleaning operations. Fumes and gases represent a slow-developing, but serious danger—one that calls for constant supervision. In a four-page bulletin, Mine Safety Appliances has collected a check list of air-borne contaminants released by metallic surface treatment, pickling, acid dipping, and metal cleaning operations. Mine Safety Appliances Co., 201 N. Braddock Ave., Pittsburgh 8, Pa.

For more details circle No. 430 on enclosed return postal card.

Metal Frame Safety Glasses

Bausch and Lomb Optical Co. announces the addition of the new M-70 metal frame safety glass to its line of protective eyewear. The M-70 combines a durable metal frame with Bal-Safe lenses for greater protection and smart appearance. The new model features a redesigned, expansion-type endpiece which allows eazy assembly of both lenses and side shields. The unique design of the new expansion endpiece means that the same front can be used with or without side shields, and with no alteration of lens size. Assembly (or disassembly) of the shields is simplified and they are held in place as securely as if they were a permanent part of the frame. Side shields are attached merely by loosening the extra, long endpiece screw, inserting the shield retainer in the eyewire groove, and retightening the screw. A choice of six types of shields is offered. One of perforated wire mesh has a fine screen to stop particles and give ample air flow; a second of insulated wire mesh features a heat-resistant covering. Four other designs (solid or perforated) are available in clear or green acetate. Catalog No. A-1800 gives full details. Bausch and Lomb Optical Co. Safety Products Dept., Rochester 2, N.Y.

For more defalls circle No. 41 on enclosed return postol card.

Electrical Control Centers

Bulletin PL-6200. 16 pages, illustrating advantages and adaptability of a.c. motor control centers and including "plan-it-yourself" forms and instructions, is available from Clark Controller Co., 1146 E. 152nd St. These control centers economize on space, simplify maintenance, and provide maximum safety for industrial and commercial installations. The heavy gauge steel cabinets are designed so load-bearing members are supported directly

on frame members, and are not dependent on the shear strength of screws.

Units are available in several types of construction, and can be provided with special control panels, lighting panels, operators' panels, and in a variety of enclosures. They house an endless variety of combinations of circuit breakers, combination starters, magnetic starters, and control relays to provide an individualized, flexible, compact installation.

For more defails circle No. 422

For more details circle No. 432 on enclosed return postal card.

Weed Killer

A new folder, available from Allied Chemical's General Chemical Division, 40 Rector St. New York 6, N.Y., describes "Urox" Weed Killer. A new granular herbicide, which is sprinkled or spread on soil to kill all weed growth in noncrop areas

For more details circle No. 433 on enclosed return postal card.

Aluminized Febric

Minnesota Mining & Mfg. Co., St. Paul 6, Minn., has made available a booklet that discusses Aluminized fabric for protection against radiant heat. Protective clothing made of this material reflects 90% of radiant heat, sheds molten splash. It is also lightweight and offers the wearer freedom of movement.

For more details circle No. 434 on enclosed return postal card

Protect Against Industrial Radiation

Radio activity, whether one likes it or not, is a day-to-day part of our present nuclear age. Consequently, detection of radiation, whether from fall-out, from nuclear power or process plants, from hospital or industrial wastes, or enemy action, is a continuing responsibility. Today, municipal fire, police, water, sever, air pollution control departments need accurate, sturdy monitoring equipment to provide this protection. Illustrated technical literature gives full details on portable Gamma-Beta meters. Riggs Nucleonics Co., 717 N. Victory Blvd., Burbank, Calif.

For more details mircle No. 435 on enclosed return postal card

Sling Chains

Data Book No. 100 contains specifications and application instructions for Herc-Alloy Chain and Sling Chains, plus hooks and other accessories. Has special section on care, use, and inspection of Sling Chains. Columbus McKinnon Chain Corp., Tonawanda, N. Y.

For more details circle No. 436 on enclosed return postal card

Hand Pumps

Data Sheets describe high-vacuum and double-action piston units for handling petroleum and other liquids. Include photos and specs. These sheets supplement an earlier 8-page catalog showing accessories and assembly chart. Tokhelm Corp., 1670 Wabash Ave., Fort Wayne, Ind.

For more details circle No. 437 on enclosed return postal card

Tread Plate

Application and fabrication data are given in 8-page booklet on abrasive tread plate. Includes table of design data and sketches of suggested safety applications for this non-skid, corrosion-resistant flooring material. Aluminum Co. of America, 1671 "F", Alcoa Bidg., Pittsburgh 19, Pa.

For more details circle No. 438 on enclosed return postal card

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Renfroe line

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- · 14 Different designs
- · 1/2 Ton to 20 Ton Capacity
- 5 to 1 Safety factor
- · All clamps safety tested
- 3 to 1 before shipment Special design clamps available on request

See Booth #1127 1960 Nat'l Plant Maintenance & Engineering Shor Cafety lock



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LITE-GUARD FLASHER BARRICADE

High Visibility 7 inch Flashers One and Two Light Models Retractable Legs



NEW TRANSISTOR CIRCUIT BETTER and BRIGHTER

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Designed to further simplify your Safety Glass inventory

NOW

FEATURES...



New CESCO Polyfit Bridge

and New CESCO Interchangeable Temples

• Here's how to go all the way in simplifying inventory with a single safety glass that will fit the vast majority of your workers. New CESCO Polyfit frames have not one but two features to make them adaptable to the widest range of nose and facial contours. New Polyfit bridge design is amazingly comfortable on most individuals—thus eliminating the need to carry a large inventory of bridge sizes.

But in addition, CESCO Polyfit frames also feature gleaming nickel-silver temples which are interchangeable with other CESCO plastic frame glasses or with most safety glasses equipped with 5-barrel hinges—regardless of color. Sur-Loc pins fasten temples to frame. Tapered temples come in two styles—cable or spatula. Polyfit frames in flesh tone plastic are available with or without side shields.

- Your choice of two sizes: No. 316 (46 x 39mm), No. 318 (48 x 41mm)
- Popular F7 shape lenses are removable for easy "on-the-spot" repair

Ask your distributor to show you the New CESCO Polyfit safety glasses
He'll also be happy to introduce you to the complete line of CESCO head and eye protective equipment
There's a CESCO distributor located in most major cities



WITH SIDE SHIELDS

For total enclosure protection, CESCO Polyfit frames also come equipped with porforated plastic side shields. They offer the same outstanding features as the spectacles described above.

• Two Sizes: No. 3165 (46 x 39mm), No. 3185 (48 x 41mm)



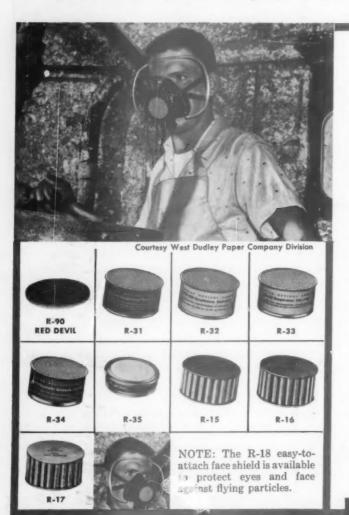


Respiratory Protection



ALL THE ECONOMY of 9 RESPIRATORS IN 1

PLUS the efficiency of the new Red Devil Filter



Pneumoconiosis-producing and nuisance dusts . . . toxic dusts not significantly more toxic than lead . . . organic vapors . . . acid gases . . . combined organic vapors and acid gases . . . ammonia — the AO R2000 Series Respirator will protect your workers from all, safely and at low cost. Interchangeability of filters and cartridges on one basic facepiece saves inventory.

The new R-90 Red Devil Variable Density Filter provides extremely high filtering efficiency and very low breathing resistance. It is approved by the U. S. Bureau of Mines for protection against all dusts not significantly more toxic than lead, pneumoconiosis-producing mists and chromic acid mist. The other dust filters (R15, R16, and R17) used with this respirator have BM approvals also.

Industry prefers the R2000 Series because of its comfort, efficiency, low maintenance as well as low cost — and because the facepiece fits. Most workers who wear glasses can wear the respirator. Supplied with our R-11 Face Cover — clean, comfortable, washable.

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